Kevin Mooney
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Via Electronc Mail

November 22, 2024

Mr. Alexander Carli-Dorsey
Project Manger
U.S. Environmental Protection Agency, New England Region
Five Post Office Square
Suite 100
Boston, MA 02109

Re: GE-Pittsfield/Housatonic River Site
Rest of River (GECD850)
Revised Updated Project Operations Plan

Dear Mr. Carli-Dorsey,

In accordance with the conditional approval letter issued by EPA on July 22, 2024, GE is submitting herewith for EPA's review and approval a revised updated Project Operations Plan for the GE-Pittsfield/Housatonic River Site, prepared for GE by Arcadis. This revised plan constitutes an updated site-wide plan and also constitutes the Project Operations Plan for the Rest of River Remedial Action. A hard copy will also be mailed to your attention.

Please let me know if you have any questions about this revised plan.

Very truly yours,

Kevin G. Mooney
Senior Project Manager

Enclosure

Cc: (via electronic mail except where noted)
Dean Tagliaferro, EPA
John Kilborn, EPA
Richard Fisher, EPA
Joshua Fontaine, EPA
Christopher Smith, EPA
Christopher Ferry, ASRC Federal
Thomas Czelusniak, HDR Inc.
Scott Campbell, Taconic Ridge Environmental

Izabella Zapisek, Taconic Ridge Environmental
Michael Gorski, MassDEP
Tamara Cardona-Marek, MassDEP
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Susan Peterson, CT DEEP
Graham Stevens, CT DEEP
Carol Papp, CT DEEP
Lori DiBella, CT AG
Whitney Behr, USFWS
Mark Barash, US DOI
Katie Zarada, NOAA
James McGrath, City of Pittsfield (plus hard copy and with hard copy to the Berkshire Athenaeum, Pittsfield's Public Library)
Andy Cambi, City of Pittsfield
Michael Coakley, PEDA
Melissa Provencher, BRPC
Smitty Pignatelli, Town of Lenox (with hard copy to Katherine O'Neil at the Lenox Library)
R. Christopher Brittain, Town of Lee (plus hard copy and with hard copy to the Lee Library)
Town Manager, Great Barrington
Town Administrator, Stockbridge
Town Administrator, Sheffield
Jim Wilusz, Tri Town Health Dept.
Lance Hauer, GE
Andrew Thomas, GE
Matthew Calacone, GE
Robert Gibson, GE
Rachel Leary, GE
Michael Werth, Anchor QEA
Mark Gravelding, Arcadis
Dennis Lowry, AECOM
James Bieke, Counsel for GE
Public Information Repository at David M. Hunt Library in Falls Village, CT (plus hard copy)
GE Internal Repository

General Electric Company

Project Operations Plan

GE-Pittsfield/Housatonic River Site

Includes:

- **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**

Revised November 2024

Project Operations Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

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Prepared For:
General Electric Company
Pittsfield, Massachusetts

Our Ref:
ARC31156

Table of Contents

Figures

Attachments

Abbreviations

AAMP	Ambient Air Monitoring Plan
Arcadis	Arcadis U.S., Inc.
CD	Consent Decree
CEPP	Contingency and Emergency Procedures Plan
CMP	Construction Monitoring Plan
CQAP	Construction Quality Assurance Plan
EPA	United States Environmental Protection Agency
Final Revised ROR SOW	Final Revised ROR Statement of Work
FSP/QAPP	Field Sampling Plan/Quality Assurance Project Plan
GE	General Electric Company
HASP	Health and Safety Plan
Non-River SOW	Statement of Work for Removal Actions Outside the River
PCB	polychlorinated biphenyl
POP	Project Operations Plan
RD/RA	Remedial Design/Remedial Action
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
ROR	Rest of River
RU	Remediation Unit
Site	GE-Pittsfield/Housatonic River Site
UDF	Upland Disposal Facility

1 Introduction

This revised Project Operations Plan (POP) comprises a series of topic-specific plans (identified below) that will be followed by the General Electric Company (GE) and its contactors in the performance of investigative and remedial activities at the GE-Pittsfield/Housatonic River Site (the Site) under a Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection, and other government agencies in October 1999 and entered by the United States District Court in Massachusetts on October 27, 2000 (EPA and GE 2000). On January 25, 2024, GE submitted a revision of GE's July 2013 POP (Arcadis 2013), which had previously been prepared and approved by EPA under the CD and which applied mainly to the Removal Actions that GE was then obligated to perform under the CD (most of which have been completed). The January 2024 revised POP (Arcadis 2024a) also constituted a POP for the activities that are being and will be conducted by GE at the Rest of River (ROR) portion of the Site pursuant to a Revised Resource Conservation and Recovery Act Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020). Under the CD and the Revised Permit, the ROR is defined as that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. In particular, the revised POP was prepared to meet the requirements set forth in Section 4.3.1.2 of GE's Final Revised ROR Statement of Work (Final Revised ROR SOW; Anchor QEA et al. 2021), as approved by EPA, for a ROR POP. EPA provided conditional approval of and comments on the January 2024 POP on July 22, 2024, directing GE to submit a revised plan. This present document constitutes that revised POP.

This revised POP generally describes the minimum requirements, general activities, protocols, and methodologies to be employed by GE and its contractors during the performance of (1) any future activities associated with the remaining Removal Actions and other non-ROR activities under the CD and the associated Statement of Work for Removal Actions Outside the River (Non-River SOW; Appendix E to the CD); and (2) the ROR Remedial Action under the Revised Permit, including investigation, remediation, and restoration activities at the ROR, as well as the construction, operation, and closure of an Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area. The portions of the Site other than the ROR are shown on Figures 1 and 2, and the ROR is shown on Figures 3 and 4.

Although the scope of activities varies depending on the specific area of the Site being addressed, certain components involve common or similar activities. For such activities, GE has prepared this revised POP so that these activities are performed in a manner that supports the attainment of the applicable Performance Standards.[1]

In accordance with the Non-River SOW, the POP has historically included the Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP) and the Site Health and Safety Plan (HASP), but those plans have always been considered separate deliverables from the rest of the POP and have been submitted on separate tracks. This will remain the case for the current POP. The most recent revised FSP/QAPP was submitted to EPA on December 21, 2023 (Arcadis 2023a) and was conditionally approved by EPA on March 21, 2024. An addendum to the FSP/QAPP was submitted to EPA on April 11, 2024 (Arcadis 2024b) and was approved by EPA on April 29, 2024. The most recent revised Site HASP was submitted to EPA in July 2023 (Arcadis 2023b) for review and informational

[1] The Performance Standards for the Removal Actions for Areas Outside the River are set forth in the CD and the Non-River SOW. The Performance Standards for the ROR Remedial Action are set forth in the Revised Permit and summarized in Section 2 of the Final Revised ROR SOW. These Performance Standards are incorporated by reference herein.

purposes. These plans are available on the EPA website for the Site,[2] as will be any addenda or future revisions of those plans.

The remaining plans that comprise the POP are as follows:

- Waste Characterization Plan;
- Soil Cover/Backfill Characterization Plan;
- Site Management Plan;
- Ambient Air Monitoring Plan (AAMP);
- Construction Quality Assurance Plan (CQAP);
- Contingency and Emergency Procedures Plan (CEPP); and
- Construction Monitoring Plan (CMP).

Each of these above-listed plans is attached to this document, and each describes the activities to which it applies.

The remainder of this document identifies the overall objectives of the POP (Section 2), provides a general description of the various plans that comprise the POP (Section 3), and further explains the circumstances under which these plans will be periodically reviewed and (if necessary) updated (Section 4). Section 5 presents references for documents cited in this POP.

Any changes to the POP will be subject to EPA review and approval.

[2] See https://semspub.epa.gov/src/document/01/680240 for the revised FSP/QAPP and https://semspub.epa.gov/src/document/01/675517 for the HASP.

2 Objectives and Format of Document

The overall 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. By establishing certain requirements, protocols, and methodologies for several components of the response actions, the POP promotes a level of consistency, uniformity, and comparability among the activities to be conducted at the Site. In addition, the components of the POP have been developed so that the various response actions, when implemented, are: (1) performed in a manner that is protective of worker and community safety and the environment, (2) consistent with the design objectives, and (3) in compliance with federal and state Applicable or Relevant and Appropriate Requirements. The requirements, protocols, and methodologies set forth in the POP will be used as reference standards for a number of future response action submittals, including the Remedial Design/Remedial Action (RD/RA) work plans and other submittals for the Remediation Units (RUs) that are part of the ROR Remedial Action,[3] as well as the UDF, and will thus minimize the amount of duplicative information that would otherwise be included in those technical submittals.

As previously indicated, 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 CD and the activities that are part of the ROR Remedial Action. Some of the common topics/activities addressed in this POP will vary depending on the specific response action, and the corresponding type, 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 this POP or the specific POP plan and/or in the pertinent project-specific work plan or other RD/RA submittal describing such activities, subject to EPA approval. In case of a conflict between this POP and an approved Site-wide work plan (such as the Revised Quality of Life Compliance Plan) or an approved RU-specific or UDF-specific work plan, the Site-wide or RU-specific or UDF-specific work plan will control.

[3] The RUs that are part of the ROR Remedial Action were identified in the Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures (Final Revised OSS; Anchor QEA, LLC 2022), approved by EPA on July 6, 2022. They correspond generally to the reaches of the ROR as designated by EPA.

3 Description of POP Components

This section provides an overview of the various plans that comprise the POP, including the FSP/QAPP and HASP, which have been submitted as separate deliverables. Some plans in the POP are primarily related to the performance of investigative activities (i.e., the FSP/QAPP), other plans are related principally to remedial design efforts (i.e., the Waste Characterization Plan and the Soil Cover/Backfill Characterization Plan), and other plans apply mainly to remediation activities (i.e., the AAMP, the CQAP, and the CMP). Finally, certain plans contained in this POP are applicable to all of the response action activities, including the Site HASP, the Site Management Plan, and the CEPP.

3.1 Field Sampling Plan/Quality Assurance Project Plan (Submitted Previously)

The FSP/QAPP identifies the various procedures, protocols, and methodologies to be employed by GE and its contractors during the performance of sampling, analysis, and other data collection activities in connection with the remaining Removal Actions and other non-ROR activities under the CD and the associated Non-River SOW and in connection with the ROR Remedial Action. The FSP/QAPP contains general requirements regarding such activities, including sampling and field procedures for each medium, sample handling and documentation procedures, laboratory analytical methods, and quality assurance/quality control procedures, with topic-specific field standard operating procedures provided as a series of appendices. However, details pertaining to the scope of a particular investigation activity (e.g., specific objectives, type, location, rationale, quantity, frequency, depths, constituents to be analyzed for, etc.) are or will be identified in the specific submittals prepared for each investigation, with references provided (as appropriate) to the FSP/QAPP.

3.2 Site Health and Safety Plan (Submitted Previously)

The Site HASP establishes the minimum health and safety requirements and procedures for response actions to be performed at the Site, including both investigative activities and remedial construction activities. Contractors and subcontractors (and their personnel) retained by GE must understand and comply with applicable regulations, site requirements established in the Site HASP, and other GE requirements. Contractors and subcontractors must obtain and review GE-specific health and safety information, prepare their own HASPs for work at the Site, and communicate with GE on health and safety matters. The contractors' and subcontractors' HASPs must include safeguards that are at least as stringent as the standards of the Site HASP and must be consistent with applicable occupational health and safety laws. Contractors and subcontractors must also prepare Job Safety Analyses for their specific work tasks to identify detailed job steps, associated hazards, and controls/mitigation measures.

If additional activities not already included in the Site HASP are required as part of any non-ROR work under the CD or Non-River SOW or as part of the ROR Remedial Action under the Revised Permit, the Site HASP will be revised, amended, or supplemented accordingly to cover those activities.

3.3 Waste Characterization Plan

The July 2013 version of the Waste Characterization Plan described the procedures for characterization and disposition of waste materials derived from excavation activities as part of the non-ROR Removal Actions and from building demolition activities. Since that time, the Revised Permit for the ROR Remedial Action established specific criteria and procedures for characterization of sediments, soils, and debris removed from the ROR as part of that

Remedial Action so as to determine whether such materials may be disposed of in the on-site UDF or must be transported to an off-site disposal facility. Those criteria and procedures were also described in Section 2.1 of GE's Revised On-Site and Off-Site Transportation and Disposal Plan for the ROR, submitted on October 15, 2024 (Arcadis 2024c); and they are or will be also discussed in detail in the RD/RA work plans for the ROR RUs, including to date the Conceptual Remedial Design/Remedial Action Work Plan for Reach 5A (Anchor QEA et al. 2023) and the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 (Anchor QEA et al. 2024).

In this situation, the revised Waste Characterization Plan (Attachment A) provides a brief summary of those procedures and criteria, with reference to the above-cited documents. It also describes other waste characterization activities, including the procedures for characterization and disposition of waste materials derived from investigative activities, excavated materials from future remediation activities other than the ROR Remedial Action (if any), liquid wastes, and future projects involving disposition of building demolition debris. It also includes a summary of disposal options for such materials, including on-site and off-site disposal. In addition, it continues to include, as Exhibit A-1, a set of Protocols for Building Demolition and Associated Characterization Activities, which identify the procedures that GE will use in the future to perform building materials characterization, demolition, and debris disposition activities for buildings on GE property at the Site.[4]

3.4 Soil Cover/Backfill Characterization Plan

Certain response actions, including the ROR Remedial Action, will require the excavation of sediments and/or soils to achieve the applicable Performance Standards. Subsequent to that removal, the affected areas will require capping or restoration, which will typically involve the placement of a sediment cap or other engineered cover or placement of backfill material. The Soil Cover/Backfill Characterization Plan (Attachment B) provides a description of the procedures that GE will use to characterize and evaluate materials (including both off-site and on-site materials) for potential use as cap/cover or backfill material. These procedures include characterization sampling of the candidate material and review and evaluation of the resulting analytical data, including consideration of potential impacts to the achievement of the applicable Performance Standards for the areas where the materials are planned to be used. As described in that plan, the criteria for both PCBs and other constituents in suitable cap/cover and backfill material differ for material to be used in the ROR and material to be used in other CD areas.

3.5 Site Management Plan

The Site Management Plan (Attachment C) describes the general procedures and measures that will be implemented during the course of the remaining Removal Actions under the CD and the ROR Remedial Action to control access to the active work areas and thus reduce the potential for site safety incidents and theft of, or damage to, facilities or equipment.

The plan describes security measures (both physical and operational) as well as management practices that will be implemented to reduce the potential for physical access to, and physical contact with, hazardous materials, structures, or equipment within designated portions of the Site, including the ROR and the UDF area. The plan

[4] In accordance with a January 31, 2020 agreement with EPA and as authorized by the Non-River SOW, GE is conducting a demolition project in which certain debris generated from the demolition of buildings within the former GE facility – namely, the former Building 12 and 14 Complexes – is being consolidated in the foundations of Buildings 12, 12X, and 12Y at that facility. That project was previously approved by EPA. As a result, it is not covered by the revised Waste Characterization Plan, the revised Protocols for Building Demolition and Associated Characterization Activities, or any of the other plans included in this revised POP.

considers the location of the work area within or outside GE-owned property, where certain security measures and access restrictions are currently in place.

3.6 Ambient Air Monitoring Plan

Certain response actions to be conducted by GE, including the ROR Remedial Action, will involve construction activities and other material handling activities that could result in the generation of airborne particulates and potentially airborne polychlorinated biphenyls (PCBs) These activities include sediment and soil removal, capping and backfilling, other remediation activities, and construction, operation, and closure of the UDF. To monitor the generation and potential wind-induced migration of such particulates and, where relevant, PCBs, GE will conduct ambient air monitoring during implementation of the field components of the response actions. The primary objective of air monitoring is to assess potential impacts to ambient air during construction activities, the need for EPA notification, and the need for additional dust control or other mitigating measures.

The AAMP (Attachment D) describes generally the field activities that could potentially generate airborne particulates and/or PCBs. It provides an overview of the particulate and PCB air monitoring activities, including a general discussion of monitoring parameters and procedures, monitoring/sampling locations and frequencies, and quality assurance/quality control procedures. In accordance with the Final Revised ROR SOW, it covers ambient air monitoring at the UDF and UDF support area and at each ROR RU, including provisions for baseline PCB air monitoring prior to active use of the UDF and UDF support area and prior to remediation activities in each RU. The AAMP provides details regarding the monitoring that will be performed for particulates and PCBs during response actions at the Site, including the ROR Remedial Action; and it refers to the revised FSP/QAPP for a description of the specific air sampling and analytical methodologies to be used. Consistent with the Final Revised ROR SOW, the AAMP notes that the specific air monitoring locations for each remedial project will be specified in the project-specific work plans, including the revised Operation, Monitoring, and Maintenance (OMM) Plan for the UDF[5] and the Final RD/RA Work Plans or Supplemental Information Packages for the ROR RUs.[6] In addition, the AAMP identifies the particulate and PCB notification and action levels proposed to be used in the ambient air monitoring programs at the Site, the notification procedures for exceedance of those levels, and the types of mitigation measures that may be taken to address exceedances of those levels. It notes that these notification and action levels and responses to exceedances are consistent with those described in the Revised Quality of Life Compliance Plan (Anchor QEA and Arcadis 2024) for the ROR Remedial Action, submitted on November 22, 2024 concurrently with this revised POP.

3.7 Construction Quality Assurance Plan

The CQAP (Attachment E) describes the various construction quality assurance (CQA) procedures and requirements that will be implemented prior to and during construction work performed at the Site, including the remediation activities that are part of the ROR Remedial Action and the construction, operation, and closure of the UDF. Specifically, the CQAP provides general CQA information regarding the various materials, activities, and procedures that may be used during the response actions, including the CQA activities to be performed prior to and during construction for the various types of activities that will be performed. By establishing such procedures/requirements, the overall objective of the CQAP is to ensure, with reasonable certainty, that a completed

[5] GE submitted an OMM Plan for the UDF in February 2024, and it was conditionally approved by EPA on September 12, 2024. Based on EPA's conditional approval, GE will submit a revised UDF OMM Plan by December 20, 2024.

[6] Consistent with the July 2013 AAMP, the revised AAMP will also continue to apply to GE's post-closure PCB air monitoring at the On-Plant Consolidation Areas (OPCAs) at the GE Pittsfield facility.

response action meets or exceeds its design criteria, plans, and specifications, thus supporting the achievement of the applicable Performance Standards. More specific CQA information will be provided in the project-specific work plans for the response actions

In addition, the CQAP describes the various roles and responsibilities of the organizations and personnel involved in a given construction project as they relate to quality assurance. It also discusses the communications among these parties to (1) facilitate implementation of the technical design, (2) identify potential construction issues/deviations, (3) resolve technical questions, and (4) document the completed activities.

3.8 Contingency and Emergency Procedures Plan

The CEPP (Attachment F) provides information to assist GE and its contractors in mitigating potential risks to on-site workers and the public resulting from an unplanned release of hazardous materials or other emergencies during a response action at the Site, including the ROR RUs and the UDF area. Each contractor and subcontractor retained by GE to perform activities at the Site will be provided with a copy of the CEPP and will be instructed to develop a contractor-specific CEPP. The contractor-specific CEPP(s) will consider the general information contained in the CEPP, as well as specific information related to the particular work area and task(s) to be performed by the contractor or subcontractor. Collectively, these plans will provide contingency measures and required/appropriate courses of action for potential spills and discharges from materials handling and/or transportation activities (both within the Site and during transportation of PCB-impacted materials from the Site to an off-site disposal facility), other emergencies (e.g., fire and explosions), and unanticipated conditions that may be encountered during the performance of a response action.

3.9 Construction Monitoring Plan

The previous (2013) POP did not include a separate CMP. However, Section II.H.9 of the ROR Revised Permit and Section 4.3.1.2 of the Final Revised ROR SOW require the revised POP to include such a plan. Accordingly, the CMP (Attachment G) provides a summary of planned construction monitoring activities and requirements during the performance of construction activities as part of the ROR Remedial Action, including construction, operation, and closure of the UDF. These activities include:

- Weather monitoring;
- River flow monitoring;
- Surveying;
- Structural/geotechnical monitoring;
- Site control inspections;
- Air quality monitoring;
- Noise monitoring;
- Odor monitoring for hydrogen sulfide;
- Surface water quality monitoring;
- Water treatment/discharge sampling;
- Imported materials testing; and
- Cap verification.

The CMP cross-references other applicable plans, such as the AAMP, Soil Cover/Backfill Characterization Plan, Waste Characterization Plan, CQAP, and Revised Quality of Life Compliance Plan, as appropriate. The CMP will provide guidance for GE's construction oversight contractor, and relevant elements will be incorporated in the technical project-specific work plan or other technical RD/RA submittals for each RU and the UDF.

4 POP Modifications

Given the wide range of activities that are covered by the POP, and considering the extended schedule over which these activities are being or scheduled to be performed, the POP may be modified in the future as needed.

The FSP is on a separate schedule. As noted above, the most recent revised FSP/QAPP was submitted for EPA review in December 2023 and conditionally approved by EPA on March 21, 2024. As provided therein, the FSP/QAPP will be reviewed annually, and GE will submit updates or amendments to it as needed. At the end of the five-year period following submission of that revised FSP/QAPP and at five-year intervals thereafter, GE will submit a further revised FSP/QAAP for EPA review and approval. The Site HASP is also on a separate schedule and will be reviewed and revised periodically as needed.

For the attached plans in this POP, following EPA approval, those plans will be referenced as appropriate in pertinent project-specific work plans or other RD/RA submittals for the applicable response action. For example, during the preparation of RD/RA work plans for each of the RUs that are part of the ROR Remedial Action, GE will review the contents of the POP in consideration of the specific work to be performed. If no modifications are necessary, the subject submittal will identify the applicable POP plan as the reference standard for the applicable activities. However, if this review indicates that modifications or supplements to the procedures and protocols presented in the POP plans are necessary, such modifications will be presented in in an amendment or addendum to the subject plan and/or in the appropriate project specific work plan(s) or other RD/RA submittal, and will be subject to EPA review and approval.

In addition, separate from any such response action-specific modifications as described above, the attached POP plans will be periodically reviewed at least every five years and will be updated if necessary. Any changes to these plans will be subject to EPA review and approval.

5 References

Anchor QEA (Anchor QEA, LLC). 2022. Final Revised Overall Strategy and Schedule for Implementation of the Corrective Measures. Prepared for General Electric Company, Pittsfield, Massachusetts. July 5.

Anchor QEA, AECOM, and Arcadis (Arcadis U.S., Inc). 2021. Final Revised Rest of River Statement of Work. Prepared for General Electric Company, Pittsfield, Massachusetts. September 14.

Anchor QEA, AECOM, and Arcadis. 2023. Conceptual Remedial Design/Remedial Action Work Plan for Reach 5A. Prepared for General Electric Company, Pittsfield, Massachusetts. September 28.

Anchor QEA, AECOM, and Arcadis. 2024. Conceptual Remedial Design/Remedial Action Work Plan for Reach 6. Prepared for General Electric Company, Pittsfield, Massachusetts. October 31.

Anchor QEA and Arcadis. 2024. Revised Quality of Life Compliance Plan – Housatonic River – Rest of River. Prepared for General Electric Company, Pittsfield, Massachusetts. November 22.

Arcadis. 2013. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised July.

Arcadis. 2023a. Field Sampling Plan/Quality Assurance Project Plan – GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company. Revised December 21. Available online at https://semspub.epa.gov/work/01/680240.pdf.

Arcadis. 2023b. Site Health and Safety Plan – GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company. Revised July 17. Available online at https://semspub.epa.gov/work/01/675517.pdf.

Arcadis. 2024a. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised January 25.

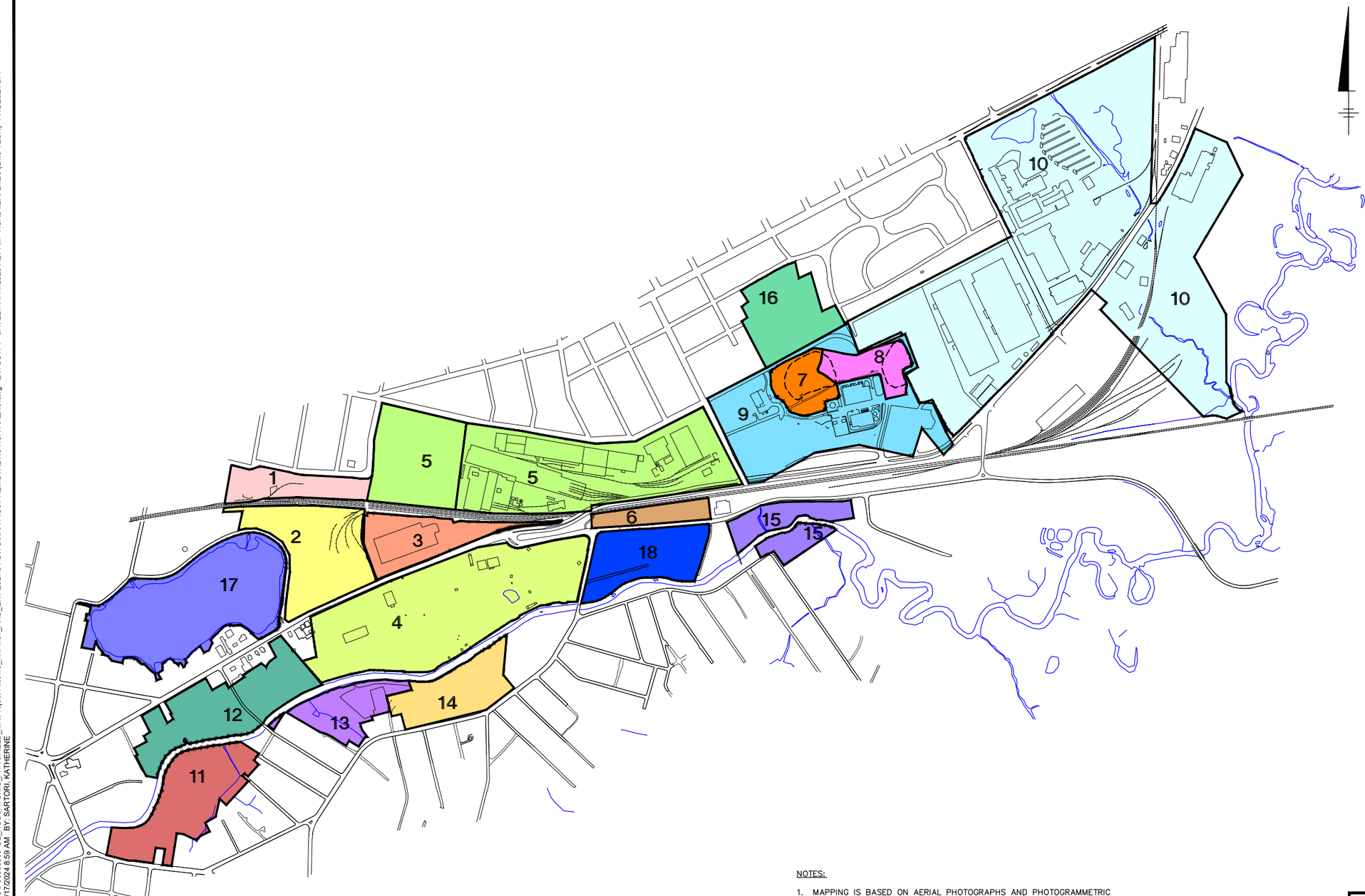
Arcadis. 2024b. Updated Standard Operating Procedure for Automated Surface Water Sampling – Addendum to the December 21, 2023 Field Sampling Plan/Quality Assurance Project Plan. Prepared for General Electric Company. April 11. Available online at https://semspub.epa.gov/work/01/681610.pdf.

Arcadis. 2024c. Revised On-Site and Off-Site Transportation and Disposal Plan – Housatonic River – Rest of River. Prepared for General Electric Company, Pittsfield, Massachusetts. October 15.

EPA (U.S. Environmental Protection Agency). 2020. Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River. December 16.

EPA and GE (General Electric Company). 2000. Consent Decree in *United States of America, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company.* Civil Action Nos 99-30225, 99-30226, 99-30227-MAP, entered by the United States District Court for the District of Massachusetts. October 27.

Figures



GENERAL ELECTRIC PLANT AREA

1 40s COMPLEX
2 30s COMPLEX
3 20s COMPLEX
4 EAST STREET AREA 2–SOUTH
5 EAST STREET AREA 2–NORTH
6 EAST STREET AREA 1– NORTH
7 HILL 78 CONSOLIDATION AREA
8 BUILDING 71 CONSOLIDATION AREA
9 HILL 78 AREA–REMAINDER
10 UNKAMET BROOK AREA

FORMER OXBOW AREAS

11 FORMER OXBOW AREAS A AND C
12 LYMAN STREET AREA
13 NEWELL STREET AREA II
14 NEWELL STREET AREA I
15 FORMER OXBOW AREAS J AND K

OTHER AREAS

16 ALLENDALE SCHOOL PROPERTY
17 SILVER LAKE AREA
18 EAST STREET AREA 1– SOUTH (NAPL/GROUNDWATER ONLY)

0 500' 1000'
APPROXIMATE SCALE

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY; AND ARCADIS CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARIES/LIMITS ARE APPROXIMATE.
4. THIS FIGURE DOES NOT SHOW THE REMOVAL ACTION AREAS IN THE FLOODPLAIN OF THE 1½ MILE REACH OF THE HOUSATONIC RIVER. THEY ARE SHOWN ON FIGURE 2 OF THE FOREGOING PROJECT OPERATIONS PLAN.

GE-PITTSFIELD/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS
PROJECT OPERATIONS PLAN

REMOVAL ACTION AREAS AT AND NEAR THE GE PITTSFIELD FACILITY

ARCADIS

FIGURE
1

CITY:Syracuse DIV/GROUP:EnvCAD DB:DMW K.Sartori, A.Schilling LD:A.Schilling PIC:P.Kearney PM:C.Averill TM:N.Smith LYR:(Opt)ON=*;OFF=*REF*
C:\Users\KsartoriIDC\ACCDocsArcadis ACC US\AUS-99999999-GE_HOUSATONIC_PITTSFIELD_MA\Project Files\10_WIP\10T_ARC_ENV\2024\01-DWG\RAA-FIG01-REMOVAL ACTION AREAS.dwg LAYOUT: 1 SAVED: 11/17/2023 7:27 AM ACADVER: 24.2S (LMS TECH) PAGESETUP: ---
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1.5MiSedPlan2.sid

LEGEND:

FLOODPL-IN PROPERTIES -DJ-CENT TO 1 1/2-MILE RE-CH -ND 1 1/2-MILE RE-CH REMOV-L -CTION -RE-S

NOTES:

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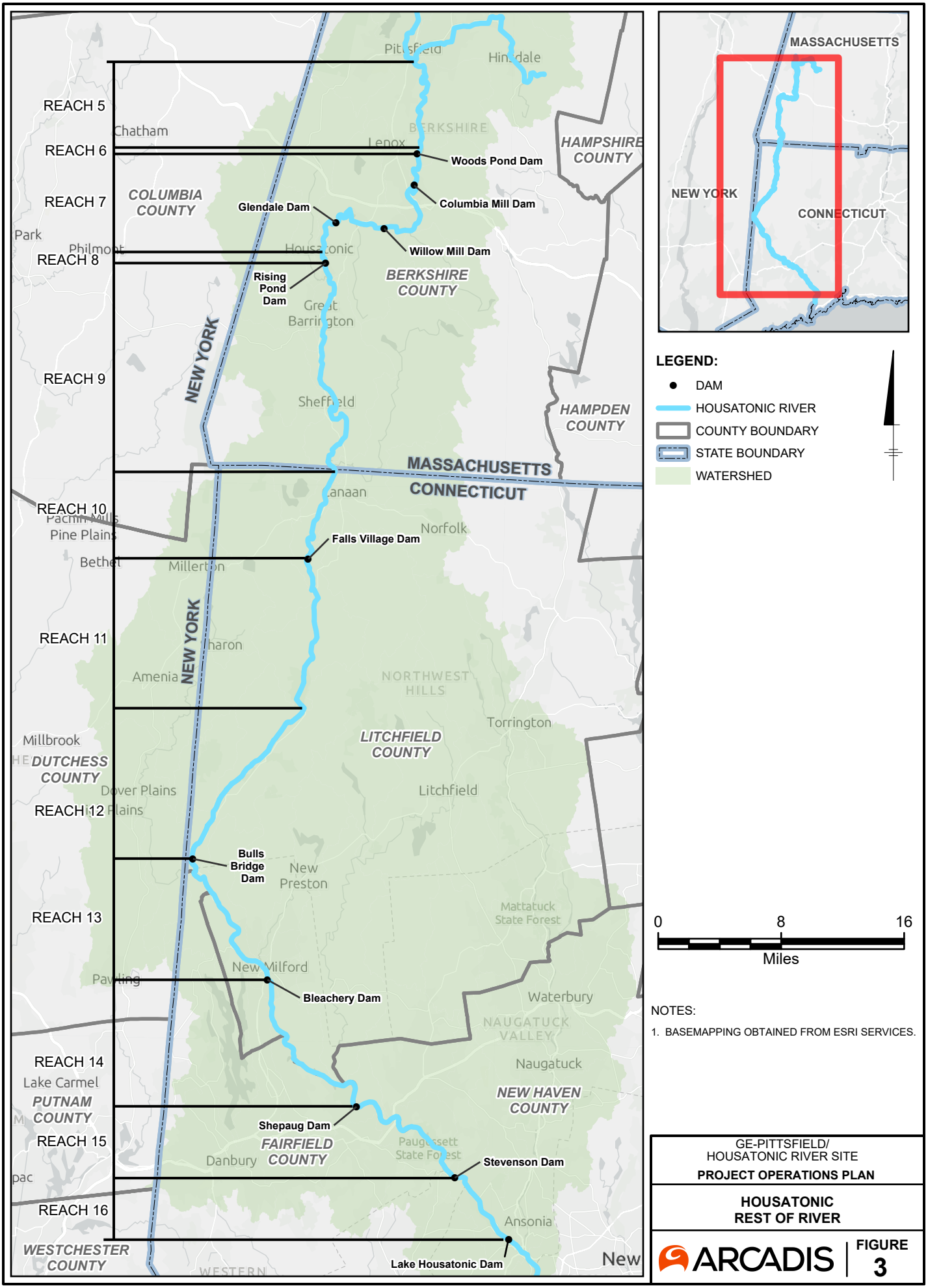
GE-PITTSFIELD / HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS
PROJECT OPERATIONS PLAN

REMOVAL ACTION AREAS AT AND ADJACENT TO 1 1/2-MILE REACH OF HOUSATONIC RIVER

ARCADIS

FIGURE
2



NOTES:

1. BASEMAPPING OBTAINED FROM ESRI SERVICES.

GE-PITTSFIELD/
HOUSATONIC RIVER SITE

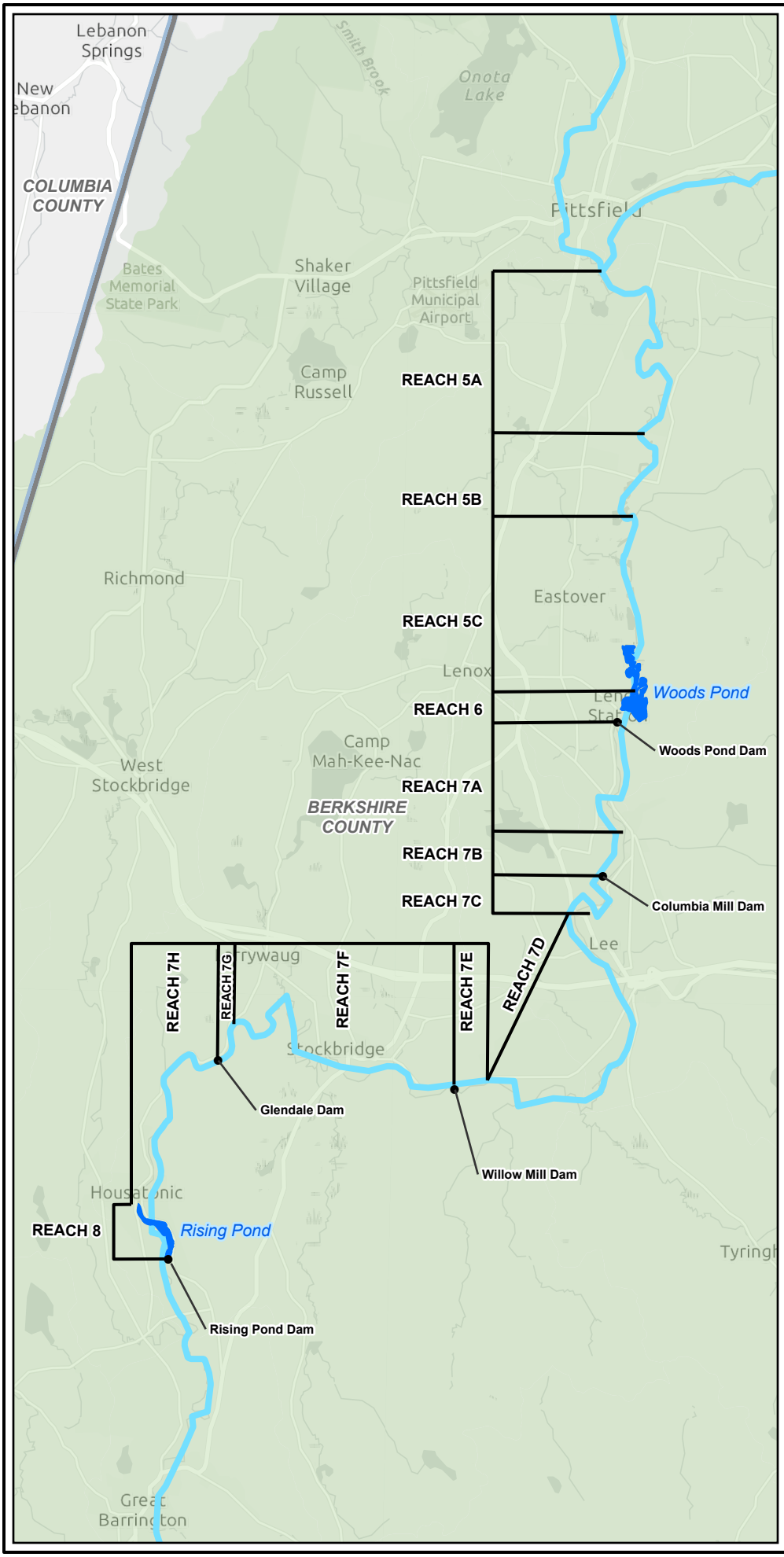
PROJECT OPERATIONS PLAN

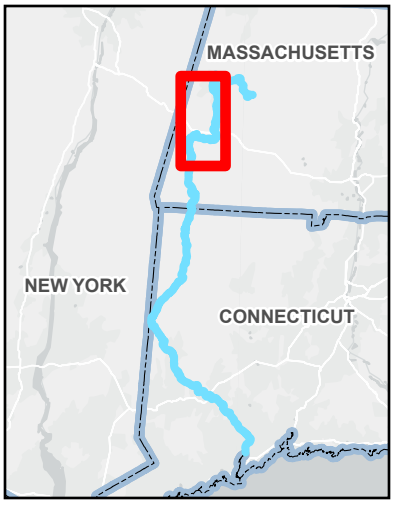
HOUSATONIC REST OF RIVER

ARCADIS

FIGURE 3

Path: T:_ENV\GE\GE_Housatonic\ArcPro Projects\ROR\POP\POP.aprx\Fig 3_Housatonic Rest of River Last Saved By: jchen 1/17/2024





LEGEND:

- DAM
- COUNTY BOUNDARY
- HOUSATONIC RIVER
- STATE BOUNDARY
- WATERSHED
- POND

0 2 4
Miles

NOTES:

1. BASEMAPPING OBTAINED FROM ESRI SERVICES.

GE-PITTSFIELD/
HOUSATONIC RIVER SITE

PROJECT OPERATIONS PLAN

**HOUSATONIC REST OF RIVER
- REACHES 5 THROUGH 8
(WITH SUBREACHES IN REACH 5 AND 7)**

ARCADIS | FIGURE 4

Path: T:_ENV\GE\GE_Housatonic\ArcPro Projects\ROR\POP\POP.aprx\Fig 4_Housatonic Rest of River—Reaches 5 through 8 (with Subreaches in Reach 5 and 7) Last Saved By: jchen 1/17/2024

Attachment A

Waste Characterization Plan

General Electric Company

Waste Characterization Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

Table of Contents

Table

Exhibit

Abbreviations

Arcadis	Arcadis U.S., Inc.
CD	Consent Decree
EA	Exposure Area
EPA	United States Environmental Protection Agency
ERE	Grant of Environmental Restriction and Easement
GE	General Electric Company
mg/kg	milligrams per kilogram
Non-River SOW	Statement of Work for Removal Actions Outside the River
PCBs	polychlorinated biphenyls
POP	Project Operations Plan
RD/RA	Remedial Design/Remedial Action
RCRA	Resource Conservation and Recovery Act
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
RFI	RCRA Facility Investigation
ROR	Rest of River
RU	Remediation Unit
SIP	Supplemental Information Package
Site	GE-Pittsfield/Housatonic River Site
SOW	Statement of Work
T&D Plan	On-Site and Off-Site Transportation and Disposal Plan
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substances Control Act
TSDF	treatment, storage, and disposal facility
UDF	Upland Disposal Facility

Attachment A
Waste Characterization Plan

1 Introduction

This revised Waste Characterization Plan, which is Attachment A to the revised Project Operations Plan (POP), will be followed by the General Electric Company (GE) and its contactors in characterizing and managing waste materials generated during performance of investigative and remediation activities at the GE-Pittsfield/Housatonic River Site (the Site) under the Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection, and other government agencies in October 1999 and entered by the United States District Court in Massachusetts on October 27, 2000 (EPA and GE 2000). On January 25, 2024, GE submitted a revision of the Waste Characterization Plan that had been included in GE's July 2013 POP (Arcadis 2013), which had been previously prepared and approved by EPA under the CD and which applied to the Removal Actions that GE was then obligated to perform under the CD (most of which have been completed). That revised Waste Characterization Plan, which was included in GE's January 2024 POP (Arcadis 2024a), also constituted a waste characterization plan for the activities that are being, and will be, conducted by GE at the Rest of River (ROR) portion of the Site as part of the ROR Remedial Action pursuant to a Revised Resource Conservation and Recovery Act (RCRA) Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020). The ROR is that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. EPA provided conditional approval of and comments on the January 2024 POP, including the Waste Characterization Plan, on July 22, 2024, directing GE to submit a further revised plan. This document constitutes that further revised Waste Characterization Plan.

This revised Waste Characterization Plan describes the procedures for characterization and disposition of waste generated during performance of: (1) future activities at the Site associated with the Removal Actions and other non-ROR activities under the CD and/or the associated Statement of Work for Removal Actions Outside the River (Non-River SOW; Appendix E to the CD); (2) the ROR Remedial Action under the Revised Permit, including investigation, remediation, and restoration activities at the ROR; and (3) other activities conducted by GE at the Site under the CD, including disposition of building demolition debris.

The Revised Permit established specific criteria and procedures for characterization of sediments, soils, and debris removed from the ROR as part of the ROR Remedial Action so as to establish whether such materials may be disposed of in the on-site Upland Disposal Facility (UDF) specified in the Revised Permit or must be transported to an off-site disposal facility. In addition, those criteria and procedures were described in Section 2.1 of GE's Revised On-Site and Off-Site Transportation and Disposal Plan for the ROR, submitted on October 15, 2024 (T&D Plan; Arcadis 2024b); and they also have been or will be described in the Remedial Design/Remedial Action (RD/RA) work plans for the ROR Remediation Units (RUs), including to date the Conceptual RD/RA Work Plan for Reach 5A (Anchor QEA et al. 2023) and the Conceptual RD/RA Work Plan for Reach 6 (Anchor QEA et al. 2024).[1] As such, those criteria and procedures are only briefly summarized in this revised Waste Characterization Plan, with reference to the above-cited documents.

In addition, this revised Waste Characterization Plan continues to include, in Exhibit A-1, a set of Protocols for Building Demolition and Associated Characterization Activities, which identify the procedures that GE will use to

[1] The RUs that are part of the ROR Remedial Action were identified in the Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures (Final Revised OSS; Anchor QEA 2022), approved by EPA on July 6, 2022. They correspond generally to the reaches of the ROR as designated by EPA.

perform future building materials characterization, demolition, and debris disposition activities for buildings on GE property at the Site, unless otherwise described in a project-specific building demolition plan.

It should be noted that excavations conducted at the GE Pittsfield facility and other areas of the Site under recorded Grants of Environmental Restrictions and Easements (EREs) will be conducted in accordance with the requirements of those EREs, not the procedures in this revised Waste Characterization Plan.

2 Summary of Sources of Material Subject to Disposal and Disposal Options

This section summarizes the types of waste materials that may be generated during the performance of various response actions at the Site, including the ROR Remedial Action (as well as during building demolition activities at GE-owned property within the Site) and the subsequent disposal of those materials. The project-specific work plans and/or other technical RD/RA submittals for each response action will identify, as applicable, the types, volume, and characteristics of the materials subject to removal and disposal. Therefore, the contents of this section are necessarily general and will be supplemented, as needed, by the project-specific work plans and/or other technical RD/RA submittals for each response action.

2.1 Types and Sources of Materials Subject to Disposal

The response actions to be conducted by GE, including future activities associated with Removal Actions under the CD and the associated Non-River SOW and those that are part of the ROR Remedial Action, will generate a variety of materials requiring treatment and/or disposal. Among these, excavated soils, sediments, and associated debris that contain polychlorinated biphenyls (PCBs) will constitute the largest volume-based waste component. Other types of materials anticipated to be generated at the Site include wastes derived from investigations, liquid wastes, residuals generated from the on-site treatment of certain liquid wastes, sorbent pads/booms used for control of spills or surface water sheens, and wastes derived from personnel and equipment decontamination procedures. In addition, separate from GE's obligations under the CD, Non-River SOW, and Revised Permit, GE may elect to demolish certain existing buildings within the former GE facility, in which case the resulting demolition debris would need to be disposed of.

Five general categories of waste materials deriving from the above-described activities and subject to subsequent disposal have been identified. They are as follows:

- Soils, Sediments, Non-Demolition Debris, and Support Area Material – Under the CD and the Revised Permit, certain areas of the Site will be subject to the required removal of soils and/or sediments containing PCBs (and, in some cases, other constituents) to meet specified Performance Standards. In addition, this category includes non-demolition debris such as organic materials (e.g., vegetation) and non-organic materials (e.g., asphalt, concrete, other inert excavated materials) that are within the removal areas addressed as part of various response actions, as well as stockpiled debris (e.g., concrete, brick) at the UDF area. It also includes support area materials not within the removal areas addressed as part of various response actions such as materials and soil excavated during construction of the UDF and materials used in the construction of access roads and staging areas for the ROR Remedial Action. The materials in this category may be subject to on-site or off-site disposal, based on the results of waste characterization. If waste characterization sampling indicates that soils excavated during construction of the UDF are unsuitable for on-site or off-site re-use, they will be subject to off-site disposal, as appropriate, based on the waste characterization results.
- Investigation and Monitoring-Derived Waste – Investigations at certain areas of the Site will involve the installation of borings and groundwater monitoring wells and collection of samples to characterize the concentrations of PCBs (and/or, in some cases, other chemical constituents) in the soil, sediment, and groundwater. As a result of these activities, personal protective equipment, investigation- and monitoring-derived waste (e.g., soil boring cuttings, residual sample materials, sampling equipment and materials, and personnel and equipment decontamination materials) will be generated and will require off-site disposal.

Similar materials that are generated during ROR construction activities will be subject to off-site disposal or disposal at the UDF, as appropriate. Contaminated water generated from monitoring well development, purging, and/or sampling will require treatment and/or disposal. With approval from EPA, monitoring well and piezometer purge water may be discharged adjacent to the well.

- Liquids and Water Treatment Residuals – During the performance of the response actions, several types of liquid wastes may be recovered/generated, including groundwater, free product (i.e., light or dense non-aqueous-phase liquid), leachate, and other miscellaneous waters generated during remediation activities (e.g., as a result of personnel or equipment decontamination procedures). Depending on the specific type of liquid, these materials will be subject to on-site or off-site treatment for disposal (or discharge). In addition, operation of GE's Building 64G water treatment facility at the GE-owned facility in Pittsfield generates treatment residuals in solid form, such as spent carbon and filter cake; and other solid materials may be generated during routine maintenance activities at the water treatment facility. Such residuals/solid materials could also be generated by temporary on-site treatment facilities if built for the ROR Remedial Action. These materials will be subject to off-site disposal.
- Spill or Sheen Control Waste – During the performance of the response actions, sorbent pads or booms may be used in control of spills of non-aqueous-phase liquid or other liquids or to control sheens that are observed on surface waters. These materials will be subject to off-site disposal.
- Building Demolition Debris – This category includes debris generated from building demolition activities within the Site. These materials will be subject to off-site disposal or, if authorized by the CD or a CD modification, on-site consolidation.

2.2 Summary of Disposal Options

The disposal of waste material generated during response actions, building demolition activities, or water treatment will depend on the type of material involved. Potential on-site disposal options are discussed in Section 2.2.1, and off-site disposal options are described in Section 2.2.2. Under certain situations, GE may propose to use existing site materials excavated during construction of the UDF or implementation of the response actions as backfill or cover material within an area. In the event that GE proposes to use such materials, the provisions outlined in the revised Soil Cover/Backfill Characterization Plan (Attachment B to the revised POP) will be followed.

2.2.1 On-Site Treatment and/or Disposal

This section describes the types of waste materials that may be subject to on-site disposition.

2.2.1.1 On-Site Water Treatment and Discharge

As previously indicated, certain liquids are routinely generated as part of the ongoing groundwater monitoring programs, as well as during the performance of soil- or sediment-related investigations or response actions. These include groundwater, collected storm water runoff, decant water, and wash waters (i.e., as a result of personnel or equipment decontamination procedures). These liquids will typically be containerized and transported to GE's Building 64G water treatment facility for treatment and discharge, provided that the liquids can be treated by that facility. The potential for treating these liquids at the Building 64G water treatment facility will be based on the specific chemical characteristics of the candidate liquids and the conditions associated with the liquid waste and potential treatment activities (i.e., volume, duration, capacity of the treatment facility, etc.). When GE plans to use that facility for treatment of liquids generated during a given response action, specific details will be provided in the

project-specific work plan or other technical RD/RA submittal associated with that response action. If temporary on-site treatment facilities are utilized (e.g., at the UDF or at temporary staging areas in the ROR), the requirements for those facilities will be included in the project-specific work plan or other technical RD/RA submittal accompanying the associated response action.

2.2.1.2 On-Site Disposal at the UDF

As part of the ROR Remedial Action, GE will construct an on-site UDF. This facility will receive certain sediments, soils, and debris removed as part of the ROR Remedial Action. As noted in Section 1, the Revised Permit for the ROR Remedial Action established specific criteria and procedures for characterization of sediments, soils, and debris removed from the ROR as part of that Remedial Action so as to determine whether such materials may be disposed of in the on-site UDF or must be transported to an off-site disposal facility. Those criteria and procedures are summarized in Section 3.1, with reference to other ROR submittals where they are described in more detail. The waste characterization sampling frequency for material to be placed into the UDF will be presented in the technical RD/RA submittals for each RU for EPA review and approval.

As also provided in the Revised Permit, the UDF will be used only for disposal of sediments, soils, and debris that are generated as part of the ROR Remedial Action and only for those sediments and soils that meet the acceptance criteria specified in the Revised Permit. The Revised Permit also provides that no material from the ROR Remedial Action may be disposed of at any other location in Berkshire County (apart from the UDF), and no material from any portion of the Site (other than the ROR) or from other response actions under the CD may be disposed of at the UDF.

2.2.1.3 On-Site Consolidation

In accordance with a January 31, 2020 agreement with EPA (GE 2020), as authorized by the Non-River SOW, certain demolition debris generated from the demolition of buildings within the former GE facility – namely, the former Building 12 and 14 Complexes – are being consolidated in the foundations of Buildings 12, 12X, and 12Y at that facility, where they are to be sealed with a cover system. This consolidation is described in GE's Buildings 12 and 14 Complexes Demolition, Disposition, and Restoration Work Plan (Arcadis 2022), submitted in December 2022 and conditionally approved by EPA on January 31, 2023. The demolition portion of this project has been completed and the consolidation is ongoing. Since this project was previously authorized and approved, it is not covered by this revised Waste Characterization Plan.

However, in the future, GE may wish to consolidate or use building demolition debris at the Site, after crushing, as backfill or cover material. Such on-site consolidation or use would need to be authorized under an appropriate CD modification, and GE would need to submit a specific proposal for such consolidation or use to EPA for review and approval.

2.2.1.4 Other

Any other proposal for the on-site disposition of waste material generated during a response action will be submitted to EPA in a project-specific work plan or other RD/RA submittal for EPA review and approval.

2.2.1.5 Materials Prohibited from On-Site Disposal

The CD and the Non-River SOW prohibit the disposal of certain materials within the GE facility site. These include free liquid, free product, intact drums and capacitors, and other equipment that contains PCBs within its internal components, as well as asbestos-containing material required by applicable law to be removed from structures

prior to demolition. Similarly, the Revised Permit prohibits the disposal in the UDF of free liquid, free product, and intact drums, capacitors, and containers, as well as any material that constitutes a hazardous waste under RCRA. If encountered, these materials will be transported off-site for disposal at an appropriate treatment, storage, and disposal facility (TSDF). For such materials, characterization activities will be dictated by the specific TSDF's applicable operating requirements and conditions.

2.2.2 Off-Site Disposal

Materials generated during the performance of the response actions at the Site that cannot be disposed of on-site, including at the UDF, will require off-site disposal at an appropriate TSDF. In addition, all building demolition debris generated in the future will be transported off-site for disposal unless on-site use is authorized by a CD modification. Pursuant to Paragraph 41 of the CD, GE periodically notifies EPA of the off-site facilities that GE uses and plans to use for disposal of waste materials generated during response actions performed under the CD so that EPA can confirm whether the facilities are in compliance with EPA's Off-Site Rule. GE currently uses several facilities for the off-site disposal of waste materials. Although future waste materials from any area may be designated for disposal at other TSDFs, the facilities currently used for off-site disposal of waste materials, and a brief description of the types of waste material typically sent to each of these facilities, are listed in Table A-1. In addition, GE is currently evaluating candidate off-site disposal facilities for use during the ROR Remedial Action. A preliminary list of facilities being evaluated for off-site disposal during the ROR Remedial Action was included in the T&D Plan.

3 Waste Characterization Procedures

This section identifies the procedures by which the waste materials generated during the response actions will be characterized for transportation and disposal. The starting point for these waste characterization activities will be sampling information developed as part of the pre-design investigation (PDI) activities or other site characterization activities, as well as the subsequent remedial design activities. This information will include the type and volume of the waste material, as well as the concentrations of the detected constituents in the waste materials. Based on this information, GE will evaluate whether additional waste characterization sampling is needed, depending on the type of waste and disposal location. As noted above, for materials that are designated for disposal at the UDF, this evaluation of whether additional waste characterization sampling is needed will be subject to EPA review and approval. Additionally, for waste materials destined for off-site disposal, the off-site TSDF operator may require additional waste characterization information to fully profile the material before accepting it for disposal at its facility. If additional waste characterization is required for off-site disposal, GE will provide the waste characterization data to EPA and inform EPA of the facility selected based on those data as well as the facility's classification as regulated or not regulated under the Toxic Substances Control Act (TSCA) .

Any sampling and analysis activities to be conducted for waste characterization purposes will be performed in accordance with GE's most recent revised Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP; Arcadis 2023), as approved by EPA, or any approved revision of it.

3.1 Soils, Sediments, and Non-Demolition Debris

This section describes the waste characterization procedures for removed soils, sediments, and non-demolition debris. Those procedures are described separately for materials removed as part of the ROR Remedial Action and for other removed materials at the Site.

3.1.1 Waste Characterization for Removed ROR Materials

As discussed above, the Revised Permit established, in Attachment E, the criteria and procedures for determining whether sediments, soils, and associated debris removed during the ROR Remedial Action will be disposed of in the on-site UDF or must be transported to an off-site disposal facility. Those criteria and procedures were also described in Section 2.1 of GE's revised T&D Plan for the ROR, Section 2.6 of the Conceptual RD/RA Work Plan for Reach 5A, and Section 2.5 of the Conceptual RD/RA Work Plan for Reach 6. Thus, they are summarized only briefly below.

Determination of whether the removed ROR material will be transported to and disposed of at the UDF or will require transport to off-site disposal facilities will be based on in-situ characterization of the material and application of the criteria in Attachment E to the Revised Permit for disposal at the UDF, with a minimum of 100,000 cubic yards of PCB-containing material required to be sent off-site.

The PCB-related criteria set forth in Attachment E to the Revised Permit for disposal in the UDF include the following:

- For sediments from the ROR (including backwaters) other than Reach 5B, sediments to be disposed of in the UDF must have a volume-weighted average PCB concentration of less than or equal to 25 milligrams per kilogram (mg/kg) within a reach or subreach. The remaining sediments must be segregated for subsequent off-site disposal. In addition, for all such sediments (including in backwaters), any sediment represented by a three-dimensional polygon associated with a single vertical core that has an average PCB concentration

greater than or equal to 100 mg/kg must be segregated for off-site disposal. For Reach 5B, all removed sediments must be disposed of off-site and may not be disposed of in the UDF.

- For floodplain soils to be disposed of in the UDF, they must have a volume-weighted average PCB concentration of less than 50 mg/kg for each Exposure Area (EA).[2] The remaining soils must be segregated for subsequent off-site disposal.
- For riverbank soils in Reach 5A, soils to be disposed of in the UDF must have a volume-weighted average PCB concentration of less than 50 mg/kg, with the remaining soils to be segregated for off-site disposal. Riverbank soils in Reach 5B must be disposed of off-site, except that any supplemental soils with PCB concentrations less than 50 mg/kg that may be removed may be disposed of in the UDF.[3]

In addition, as noted above, the Revised Permit prohibits the disposal of certain types of waste in the UDF – namely, free liquid, free product, and intact drums, capacitors, and containers, as well as any material that meets the federal criteria for hazardous waste under RCRA.

To determine whether sediments, soils, and associated debris from the ROR meet the above-described PCB criteria for disposal at the UDF, sediment and soil samples have been (for Reach 5A) or will be (for other RUs) collected and analyzed for PCBs during the PDI of each RU, and the results have been or will be evaluated against the above criteria.[4]

It will also be necessary to determine whether any of the material to be removed from the ROR is subject to any of the above prohibitions on disposal in the UDF. In particular, Attachment E to the Revised Permit provides that, for the purposes of determining whether materials designated for the UDF constitute characteristic RCRA hazardous waste, GE may use existing relevant ROR data from GE's RCRA Facility Investigation (RFI) and apply the "20 times rule" (described below) and/or may use relevant data from the 1½-Mile Reach Removal Action. It states further that if existing data are not sufficient to demonstrate that material will not constitute RCRA hazardous waste, GE will propose additional sampling in appropriate work plans.

As discussed in Section 2.1 of GE's revised T&D Plan, GE has conducted several evaluations to date indicating that sediments and soils from the ROR are unlikely to constitute RCRA hazardous waste. These evaluations have included the following:

- GE reviewed the existing data from the disposal characterization analysis performed for the Removal Action at the 1½-Mile Reach of the Housatonic River, including over 90 sediment and soil samples from that reach and adjacent floodplain that were analyzed for hazardous waste characteristics by the toxicity characteristic leaching procedure (TCLP). None of the samples showed leachate levels in excess of the regulatory limits that would result in the material being classified as hazardous waste.
- GE conducted screening of existing ROR sediment and floodplain soil data, including RFI data, for non-PCB constituents to evaluate whether sediments and soils designated for removal may be considered RCRA

[2] The floodplain EAs are defined in the Revised Permit.

[3] Reach 5A and 5B are the only ROR RUs where the riverbanks are subject to remediation under the Revised Permit.

[4] In accordance with the Revised Permit, relevant sediment data from GE's prior RCRA Facility Investigation will also be used in conjunction with the PDI data to evaluate certain disposal requirements.

hazardous waste. This screening was performed using the "20 times rule."[5] This screening of the ROR data indicated that characteristic RCRA hazardous waste would not be expected in the ROR.

- As described in the Conceptual RD/RA Work Plan for Reach 5A, a subset of Reach 5A PDI in-river sediment samples collected in 2023 was subject to TCLP testing for disposal characterization; specifically, those sediment samples were analyzed for TCLP metals, volatile organic compounds, semi-volatile organic compounds, pesticides, and herbicides. The results indicated that none of the TCLP parameters was detected above the RCRA toxicity characteristic regulatory limits in 40 CFR § 261.24.

For the more downstream RUs, once removal areas are defined and determination of on-site vs. off-site disposal is made, existing ROR data for non-PCB constituents will again be reviewed (using the 20 times rule) to confirm that materials designated for disposal in the UDF do not contain RCRA hazardous waste. Alternatively, GE may propose additional TCLP sampling in appropriate work plans for the RUs to confirm the same conclusion, as GE has done for Reach 6 in the Conceptual RD/RA Work Plan for that reach.

Based on the in-situ delineation and the evaluation against the above-described PCB and hazardous waste criteria, the sediments and soils from each ROR RU will be designated for on-site or off-site disposal. Any debris encountered is planned to be classified in a manner consistent with the surrounding sediment and soil characterization. If large debris is removed that is potentially subject to regulation for disposal or does not conform to the disposal characterization of the surrounding sediment or soil, that debris will be segregated, and additional characterization of the debris will be performed.

In addition, as provided in Paragraph 7 of Attachment E to the Revised Permit, other construction-related materials from the ROR Remedial Action not addressed above, such as materials used for construction of access roads and staging areas, will be disposed of in the UDF provided that those materials are sampled prior to disposal and contain PCB concentrations less than 50 mg/kg. Consistent with this authorization, specific plans for sampling and disposal of such materials for a given RU will be included in the RD/RA Work Plan or Supplemental Information Package (SIP) for that RU.

For material that has been designated for off-site disposal (using the criteria summarized above), that material will be further characterized as necessary to the extent required by the selected off-site TSDF. Such material may fall into three categories: (1) material containing PCB concentrations at or above 50 mg/kg, whose disposal is regulated under EPA's TSCA regulations; (2) material that constitutes characteristic hazardous waste under EPA's RCRA regulations (if any); and (3) material whose disposal is not regulated under the TSCA regulations and which does not constitute hazardous waste under RCRA regulations. As noted above, if additional waste characterization is required by the off-site TSDF operator, GE will provide the waste characterization data to EPA and inform EPA of the facility selected based on those data and the facility's regulatory status to receive the category of material planned to be transported to it.

3.1.2 Waste Characterization for Non-ROR Excavated Materials

Removed soils, sediments, and other excavated materials from the Site that are not associated with the ROR Remedial Action will generally be transported off-site for disposal at an appropriate TSDF (unless otherwise

[5] Under this rule, the in-situ sample results for constituents that could cause materials to be hazardous waste (expressed as mg/kg or parts per million) are divided by 20, changing the reporting units from milligrams per kilogram to micrograms per liter, and the converted results are compared to the allowable extract toxicity characteristic concentration limits in 40 CFR § 261.24. Materials that are determined through this screening evaluation to have concentrations within those allowable regulatory limits will not be considered RCRA hazardous waste (so long as there is no basis for believing that the material would constitute hazardous waste on other grounds).

proposed by GE and approved by EPA on a project-specific basis). These materials will be characterized as necessary to select the appropriate off-site TSDF (i.e., to evaluate whether the waste material is subject to disposal regulation under TSCA and/or would constitute hazardous waste under RCRA and thus need to be sent to a facility authorized to receive and dispose of such material, or whether the material can be sent to a non-TSCA, non-RCRA facility). This will involve the following steps:

- Step 1: GE will review the available in-situ PCB data from the pertinent pre-design or other investigations to evaluate which waste material subject to excavation and disposal (if any) contains PCBs at concentrations at or greater than 50 mg/kg and thus would be subject to the disposal requirements of EPA's TSCA regulations, and which material contains PCBs at concentrations less than 50 mg/kg and thus is not subject to TSCA regulations. This evaluation will generally be based on the use of discrete in-situ PCB sampling data, combined with the use of Thiessen polygons (described in Attachment E to the Non-River SOW), to evaluate the horizontal extent of the waste materials that are and are not subject to TSCA regulation. Under this approach, the material within each polygon associated with a sample containing PCBs at concentrations at or greater than 50 mg/kg is considered subject to TSCA, and the material within each polygon associated with a sample containing PCBs at concentrations less than 50 mg/kg is considered non-TSCA. In some cases, the discrete PCB sampling results from a given boring or borings may be segregated by depth, such that the material from certain depth intervals (where the results show PCBs at concentrations at or greater than 50 mg/kg) would be considered subject to TSCA, and the material from other depth intervals (where the results show PCBs at concentrations less than 50 mg/kg) would be considered non-TSCA material.

  In some situations, GE may propose to use averaging or composite sampling techniques to make the TSCA/non-TSCA determination. For example, GE may propose to vertically average the in-situ results from a given boring to evaluate whether the material associated with that boring location contains PCBs at concentrations greater than or less than 50 mg/kg. Any proposal to use averaging techniques to characterize waste material as either subject or not subject to TSCA will be presented in a project-specific RD/RA submittal for EPA review and approval. In other cases, GE may propose to use an in-situ or ex-situ composite sampling technique to evaluate the PCB concentration of a given quantity of waste material. Unless otherwise proposed in the project-specific RD/RA submittal for EPA review and approval, in-situ or ex-situ composite sampling will involve the collection of 10 discrete "grab" samples for every 2,000 cubic yards of waste material (or less if the volume of waste material to be characterized is less than 2,000 cubic yards).

- Step 2: In addition to determining whether the waste material is subject to TSCA regulation, an evaluation will be made as to whether that material would be classified as hazardous waste under EPA's RCRA regulations. To assess the potential for materials to be classified as RCRA hazardous waste, GE will use the "20 times" rule described above. Materials that are determined through this screening evaluation to have concentrations within allowable toxicity characteristic regulatory limits in 40 CFR § 261.24 will not be considered RCRA hazardous waste (so long as there is no basis for believing that the material would constitute hazardous waste on other grounds). If this screening exercise indicates the potential for exceedances of the allowable toxicity characteristic regulatory limits for any constituent, or if such screening is not conducted, GE will either (1) conduct a more detailed evaluation or (2) opt to dispose of the material at an off-site TSDF authorized to receive hazardous waste. If a more detailed evaluation is conducted, it will consist of the collection of additional, representative samples for analysis by the TCLP. If these analyses do not show any exceedances of the allowable TCLP extract concentrations (and there is no basis for believing that the material would constitute hazardous waste on other grounds), the material will be deemed not to be RCRA hazardous waste. If any of the collected samples contains constituents at levels greater than the allowable TCLP extract concentrations, these materials will be designated as RCRA hazardous waste and subject to disposal at an appropriate off-site TSDF.

Based on these waste characterization activities, the waste materials will be divided into the appropriate categories for disposal. These categories will be presented in a project-specific RD/RA submittal and may include categories similar to those described in Section 3.1.1. In this situation, the categories could include: (1) materials that contain PCB concentrations at or greater than 50 mg/kg and thus are subject to regulation under TSCA but that would not be considered hazardous waste under RCRA (i.e., TSCA/non-RCRA materials); (2) materials that are regulated under TSCA and that would also constitute hazardous waste under RCRA (i.e., TSCA/RCRA materials); (3) materials that contain PCB concentrations less than 50 mg/kg and thus are not subject to regulation under TSCA and that would also not be considered hazardous waste under RCRA (i.e., non-TSCA/non-RCRA materials); and (4) materials that are not subject to regulation under TSCA but constitute hazardous waste under RCRA (i.e., non-TSCA/RCRA materials). Based on these categories, the appropriate off-site TSDF(s), such as described in Table A-1, will be selected for disposal of the materials and identified in a project-specific RD/RA submittal.

In the event that GE proposes to use excavated soil or other non-demolition debris from the Site as backfill or cover material within a non-ROR response action area, GE will characterize such material as necessary to confirm that the material meets the criteria in Section 3.2 of the revised Soil Cover/Backfill Characterization Plan (Attachment B to the revised POP) for on-site use of site materials. GE will include any such proposal in an appropriate project-specific submittal for EPA review and approval. That submittal will include specific details regarding the nature of the proposed use and the available waste characterization data.

Similarly, for any other proposal for the on-site disposal of excavated soil or other non-demolition debris from areas other than the ROR, GE will present the proposed waste characterization procedures and/or available data to EPA for review and approval in the project-specific submittal containing that proposal.

3.2 Investigation- and Monitoring-Derived Wastes

Several types of investigation- and monitoring-derived wastes may be generated during the response actions (including the ROR Remedial Action) or building demolition activities, including the following:

- Soil boring cuttings (residual soils from installation of soil borings/monitoring wells);
- Residual sample materials;
- Sample collection equipment/sample glassware;
- Used personal protective equipment;
- Personnel and equipment decontamination materials;
- Wash water/rinsates;
- Monitoring well development and purge water; and
- Groundwater pumped from vaults, pits, and sumps within buildings being prepared for demolition.

Liquid wastes generated during investigation and monitoring activities associated with response actions or building demolition activities will either be transported off-site for disposal or transferred to GE's Building 64G water treatment facility for treatment and discharge in accordance with the procedures described in Sections 2.2.1 and 3.3. With approval from EPA, monitoring well and piezometer purge water may be discharged adjacent to the well.

Non-liquid wastes generated during investigation and monitoring activities associated with response actions or building demolition activities will be characterized based on the analytical results from the associated media from which the materials originated or which they contacted during use (e.g., soil, sediment) and then disposed of in

accordance with the allowable disposal options, as described in this plan, for such associated material. In some cases, GE may elect to perform additional sampling of this waste material to assist with such characterization.

3.3 Liquid Wastes

The available options for the disposal of liquid wastes generated during response actions (other than investigation- and monitoring-derived liquids, which are discussed in Section 3.2) include treatment and discharge through GE's Building 64G water treatment facility or a temporary on-site water treatment facility constructed as part of a response action or at the UDF or off-site disposal at an appropriate TSDF. For example, liquid wastes from the UDF will either be sent to GE's Building 64G water treatment facility or be treated and discharged from an on-site treatment facility at the UDF property, as will be described in an addendum to the revised UDF Final Design Plan. Similarly, liquid wastes from dewatering operations at the temporary staging areas used for the ROR Remedial Action will either be sent to the Building 64G water treatment facility or treated and discharged from a temporary on-site treatment facility, as will be described on an RU-specific basis in the Final RD/RA Work Plans or SIPs for the RUs.

Should GE elect to use its Building 64G water treatment facility, the candidate liquid wastes will be characterized by collecting representative samples of the material for analyses of PCBs and other pollutants in accordance with the applicable National Pollutant Discharge Elimination System discharge permit for the Building 64G water treatment facility. The data for these samples will then be evaluated for whether the liquid waste can be treated at the treatment facility in consideration of its treatment capabilities, available capacity, permit/operating requirements, etc. If temporary on-site treatment facilities are used, the testing requirements for those facilities will be included in the project-specific work plan or other technical RD/RA submittal accompanying the associated response action (e.g., an addendum to the revised UDF Final Design Plan or the Final RD/RA Work Plan or SIP for the subject RU).

If any liquid waste generated during the response actions cannot be treated on-site, such waste will be transported off-site for disposal. In that event, or if GE otherwise elects to transport such liquids off-site for disposal, additional sampling and laboratory testing may be performed if required by the TSDF.

3.4 Building Demolition Debris

For the disposition of debris resulting from future building demolition activities at the Site (if any), GE will follow the characterization protocols presented in the document entitled Protocols for Building Demolition and Associated Characterization Activities, which is attached to this plan as Exhibit A-1, unless otherwise proposed in a project-specific building demolition plan.[6] These protocols include procedures for identifying and removing certain materials from the buildings prior to demolition and disposing of those materials at appropriate off-site TSDFs. Such materials include free liquid or free product, equipment or devices containing PCBs within their internal components, asbestos-containing materials required by applicable law to be removed from structures prior to demolition, items containing liquid mercury, and chlorofluorocarbons. The protocols also contain procedures for characterizing the other building materials to evaluate whether they contain PCB concentrations at or exceeding

[6] As noted in Section 2.2.1.3, as authorized by the Non-River SOW and in accordance with a January 31, 2020 agreement with EPA, certain demolition debris generated from the demolition of the former Building 12 and 14 Complexes is being consolidated in the foundations of Buildings 12, 12X, and 12Y. The characterization of that debris for such consolidation was discussed in GE's December 22, 2022 work plan for this project, conditionally approved by EPA on January 31, 2023. As such, as also noted above, this previously approved debris disposition project is not covered by this revised Waste Characterization Plan.

50 mg/kg (unless GE elects to assume that they do) and/or other constituents at concentrations that would cause them to constitute RCRA hazardous waste, so as to identify the appropriate off-site TSDF(s). GE will follow the characterization protocols described in Exhibit A-1 – or alternate procedures if specifically approved by EPA – in determining the appropriate disposal of such building demolition debris.[7]

3.5 Other Solid Wastes

Water treatment residual solids from the Building 64G water treatment facility or a temporary on-site water treatment system (i.e., spent carbon and filter cake) and other solid materials generated during routine maintenance activities at the water treatment facilities, will be sampled in accordance with GE's most recently approved FSP/QAPP and then transported to an appropriate off-site TSDF. Used sorbent pads and booms from spill or sheen control activities will also be transported to an off-site TSDF for appropriate disposal.

[7] As noted in Exhibit A-1, in the event that GE proposes in the future to use certain building demolition debris at the Site, after crushing, as backfill or cover material, and such on-site use is allowed under an appropriate CD modification, GE will submit a specific building characterization sampling protocol to EPA for review and approval.

4 References

Anchor QEA (Anchor QEA, LLC). 2022. Final Revised Overall Strategy and Schedule for Implementation of the Corrective Measures. Prepared for General Electric Company, Pittsfield, Massachusetts. July 5.

Anchor QEA, AECOM, and Arcadis (Arcadis U.S., Inc.). 2023. Conceptual Remedial Design/Remedial Action Work Plan for Reach 5A. Prepared for General Electric Company, Pittsfield, Massachusetts. September 28.

Anchor QEA, AECOM, and Arcadis. 2024. Conceptual Remedial Design/Remedial Action Work Plan for Reach 6. Prepared for General Electric Company, Pittsfield, Massachusetts. October 31.

Arcadis. 2013. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised July.

Arcadis. 2022. Buildings 12 and 14 Complexes Demolition, Disposition, and Restoration Work Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. December 23.

Arcadis. 2023. Field Sampling Plan/Quality Assurance Project Plan – GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company. Revised December 21.

Arcadis. 2024a. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised January 25.

Arcadis. 2024b. Revised On-Site and Off-Site Transportation and Disposal Plan – Housatonic River – Rest of River. Prepared for General Electric Company, Pittsfield, Massachusetts. October 15.

EPA (U.S. Environmental Protection Agency). 2020. Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River. December 16.

EPA and GE (General Electric Company). 2000. Consent Decree in *United States of America, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company*. Civil Action Nos. 99-30225, 99-30226, 99-30227-MAP, entered by the United States District Court for the District of Massachusetts. October 27.

GE. 2020. Letter from A Silfer (GE) to D Tagliaferro (EPA). re: GE-Pittsfield/Housatonic River Site, East Street Area 2-North (GECD140), Agreement on Consolidation of Certain Building Demolition Materials in Foundations of Buildings 12, 12X, and 12Y. January 31.

Table

Table A-1

Off-Site Waste Management Facilities Receiving Shipments of Waste Materials Generated from Response Actions Under Consent Decree and Other Activities at Consent Decree Site

Receiving Facility	Type(s) of Waste Material
Veolia ES Technical Solutions L.L.C Highway 73, 3.5 mi. W. of Taylors Bayou Port Arthur, Texas 77640 EPA ID #TXD000838896	Non-aqueous-phase liquid (NAPL) recovered from GE's NAPL recovery systems at and adjacent to the former GE Plant in Pittsfield and containing polychlorinated biphenyls (PCBs).
	Dense NAPL (DNAPL) recovered from GE's NAPL recovery systems and containing coal-tar constituents but no PCBs.
	Other wastewaters and waste oils with any detectable PCB levels.
	Solvents containing PCBs at concentrations regulated under the Toxic Substances Control Act (TSCA).
	Excavated soils and other dry debris from the Site containing PCBs (including at TSCA-regulated concentrations) and other hazardous substances (including materials that constitute hazardous waste under the Resource Conservation and Recovery Act [RCRA]).
	PCB-containing light ballasts and capacitors recovered from the Site (shipped in 55-gallon drums).
	TSCA-regulated lab packs containing small quantities of PCB-containing liquids in small drums.
	Vapor-phase carbon from treatment facilities at the former GE Plant.
	Oil-soaked debris (e.g., oily rags, etc.).
High Acres Landfill and Recycling 425 Perinton Parkway Fairport, New York 14450 EPA ID #: None Required	Dry soils and debris that do not contain PCB concentrations regulated under TSCA and do not constitute hazardous waste under RCRA.
Veolia ES Technical Solutions, L.L.C. 125 Factory Lane Middlesex, New Jersey 08846 EPA ID # NJD002454544	Spent solvents with no PCBs, non-hazardous water with no PCBs, and waste oils with no PCBs.

Receiving Facility	Type(s) of Waste Material
Veolia ES Technical Solutions, L.L.C. 1 Eden Lane Flanders, New Jersey 07836 EPA ID # NJD980536593	Lab pack chemicals (corrosives, flammables, toxics).
	Compressed gases and cylinders.
Veolia ES Technical Solutions, L.L.C. 7 Mobile Avenue Sauget, Illinois 62201 EPA ID # ILD098642424	Lab pack chemicals (corrosives, flammables, toxics).
	Compressed gases and cylinders.
Advanced Disposal Services - Greentree Landfill 635 Toby Road Kersey, PA 15846 EPA ID # None Required	Dry soils and debris that do not contain PCB concentrations regulated under TSCA and do not constitute hazardous waste under RCRA.
Casella Waste Systems Inc. Ontario County Landfill 1879 State Route 5 & 20 Stanley, NY 14561 EPA ID # None Required	Dry soils and debris that do not contain PCB concentrations regulated under TSCA and do not constitute hazardous waste under RCRA.
Heritage Environmental Services, LLC 4370 W. County Road 1275 N Roachdale, IN 46172 EPA ID # IND980503890	Building demolition debris from the former GE Plant containing PCBs, including at TSCA-regulated concentrations (namely, PCB Remediation Waste as defined in EPA's TSCA regulations).
US Ecology Michigan Landfill Wayne Disposal, Inc. 49350 North I-94 Service Drive Belleville, MI 48111 EPA ID # MID048090633	Excavated soils and other dry debris (e.g., personal protective equipment) from the Site containing PCBs (including at TSCA-regulated concentrations) and other hazardous substances (including materials that constitute hazardous waste under RCRA).
	Building demolition debris from the Site containing PCBs (including at TSCA-regulated concentrations) and other hazardous substances (including materials that constitute hazardous waste under RCRA).
US Ecology Michigan Landfill Michigan Waste Disposal Treatment Plant 49350 North I-94 Service Drive Belleville, MI 48111 EPA ID # MID000724831	Excavated soils and other dry debris (e.g., personal protective equipment) from the Site that do not contain PCB concentrations regulated under TSCA and may contain other hazardous substances (including materials that constitute hazardous waste under RCRA).

Receiving Facility	Type(s) of Waste Material
Veolia ES Technical Solutions, L.L.C. 90 Pleasant Street West Bridgewater, MA 02379 EPA ID #MAC300017498	Universal waste mercury lamps, mercury devices, and batteries removed from buildings.

Exhibit

Contents

1 Introduction

This document identifies the general protocols that the General Electric Company (GE) will use to perform future building characterization and demolition activities for buildings located at GE-owned property in Pittsfield, Massachusetts, which GE plans to demolish. It applies to such activities on GE property located within the GE-Pittsfield/Housatonic River Site (Site), as defined in the Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection, and other government agencies in October 1999 and entered by the United States District Court in Massachusetts on October 27, 2000. The CD included a Statement of Work for Removal Actions Outside the River (Non-River SOW), including such actions at the GE property subject to the CD.

This document describes the procedures and protocols that GE will follow in conducting building characterization, building demolition, disposition of building demolition debris, and post-demolition activities. The pre-demolition activities, the building demolition activities themselves, off-site disposition of demolition debris, and post-demolition activities are not part of the response actions subject to the CD and thus do not require specific approval from EPA. As such, the procedures and protocols presented herein regarding those activities are provided for informational purposes and for any comments that EPA may have. For any future on-site use of building demolition debris, which would be subject to the CD, a modification of the CD would be necessary and EPA approval would be required.[1]

2 Pre-Demolition Assessment / Removal Activities

Prior to conducting demolition activities GE will perform certain activities to assess, and remove as appropriate, the materials described below.

- **Equipment Containing Free Liquids, Free Product, or PCBs** – Prior to demolition of a building, GE will identify machinery, equipment, or other items located in the building that may contain free liquid or free product or may contain liquid polychlorinated biphenyls (PCBs) within their internal components. To perform these activities, GE will use only qualified and experienced contractors working in accordance with specifications and requirements developed by GE. If any such items are identified, GE will drain those items and transport the free liquid, free product, or liquid PCBs off-site for appropriate disposal in accordance with applicable regulations and in accordance with EPA Consent Agreement Order TSCA 01-2002-0049. To perform the removal of liquids from such items, a building reconnaissance and equipment inventory will initially be prepared by qualified and experienced personnel to identify the location, type, and potential volume of liquid that may be present within a given item. This assessment may involve review of the manufacturer's information, if available. A removal plan will then be developed based on the type, nature, and location of the subject liquids and the applicable disposition requirements. Removal activities will be equipment- and liquid-specific; as needed, certain

[1] As a separate matter, in December 2022, GE submitted a *Buildings 12 and 14 Complexes Demolition, Disposition, and Restoration Work Plan* (Arcadis 2022), which was conditionally approved by EPA on January 31, 2023. That work plan covered the demolition of certain buildings at the former GE Pittsfield facility – namely, the former Building 12 and 14 Complexes – and provides for the consolidation of the resulting demolition debris in the foundations of Buildings 12, 12X, and 12Y, where it will be sealed with a cover system. This on-site disposition of building demolition debris was authorized by the Non-River SOW (part of the CD) and was specifically agreed to in a January 31, 2020 agreement with EPA (GE 2020). This demolition project is currently in the pre-demolition removal and preparation phase. Since this project has already been authorized and approved, it is not covered by the current Building Demolition Protocols.

equipment will be dismantled to access liquids. Following liquid removal, adsorbent materials (e.g., speedi-dry) will be placed within the former liquid reservoir(s) to adsorb any liquid residuals that may be present. Subsequent to the removal of any free liquids, free product, or liquid PCBs, the equipment or item will be disposed of at an appropriate off-site facility, subject to the applicable restrictions associated with such disposition. As an alternative, rather than drain the liquids from such equipment or other items, GE may elect to transport the equipment or item itself (either in its entirety or portions thereof) containing the free liquid, free product, or liquid PCBs off-site for subsequent removal and disposal activities at the off-site facility.

- **Asbestos-Containing Material** – GE will perform an inspection for the presence of Asbestos-Containing Material (ACM) on interior and exterior building components, utilizing sample collection and analysis by Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM). These activities will be performed in accordance with the Occupational Safety and Health Administration (OSHA) regulations in 29 CFR 1926.1101 and all other applicable federal, state, and local regulations. Based on the results of this inspection, GE will remove ACM that is required by applicable laws and regulations to be removed from structures prior to demolition (see 40 CFR Part 61 Subpart M, 301 CMR 7). Such ACM will be sent off-site for disposal at an appropriate permitted disposal facility. The removal, containerization, transportation, and disposal of such ACM will be performed in accordance with applicable federal, state, and local regulations, including 29 CFR 1910.1101, 40 CFR Part 61 Subpart M, 310 CMR 6, and 453 CMR 6. Abatement will be performed by a Massachusetts-licensed abatement contractor under the oversight of a Massachusetts-Licensed Asbestos Project Monitor. A notification will be submitted to the Commonwealth of Massachusetts at least 10 days prior to the commencement of abatement activities.
- **Equipment Containing Chlorofluorocarbons (CFCs)** – GE will identify air conditioning units and compressors that contain CFCs. The CFCs will be removed from these devices in accordance with applicable laws and regulations by an approved contractor and properly treated and/or disposed of off-site.
- **Mercury-Containing Devices** – GE will also identify and remove thermostats and switches containing liquid mercury and will transport those items to appropriate off-site disposal facilities.

In addition to the bulleted items listed above, GE will ensure that, prior to the initiation of demolition activities, bulk waste solids that are stored, staged, stockpiled, or otherwise present within the interior of a building (i.e., excluding the building materials themselves) and that could potentially leach contaminants at concentrations exceeding allowable extract concentration limits associated with the Toxicity Characteristic Leaching Procedure (TCLP) will be separately characterized to determine whether they constitute hazardous waste under the Resource Conservation and Recovery Act (RCRA). The results of this testing will be considered along with the results of the pre-demolition building characterization discussed in Section 3 in developing a plan for the appropriate disposition of the materials from the given building.

3 Characterization of Building Demolition Debris

Following the performance of the pre-demolition assessment/removal activities described in Section 2, characterization of the remaining building materials will be performed to assess the potential off-site disposition alternatives. GE may elect to assume that all the remaining building materials would contain PCBs at concentrations at or above 50 ppm and would thus be subject to regulation under Toxic Substances Control Act (TSCA). In that case, no additional building characterization sampling for PCBs will be conducted, and all of the

building materials will be designated for transport to an off-site TSCA-authorized facility. Alternatively, GE may conduct pre-demolition characterization of the building materials to determine whether the waste material is subject to TSCA regulation and thus must be sent to a TSCA-authorized facility, or whether the material can be sent to a non-TSCA facility. Such characterization will involve the collection of samples of the building materials for PCB analysis to determine whether any of those materials contain PCBs at concentrations at or above 50 ppm. Such sampling will be conducted at the frequencies necessary to meet the characterization requirements of the off-site disposal facility(ies), considering the existing data (if any) and the demolition technique to be utilized.

In addition, GE will conduct the necessary sampling, using the TCLP, to determine whether the building materials would constitute hazardous waste under RCRA and thus must be sent to an off-site RCRA or TSCA/RCRA facility authorized to receive such material. If such sampling is not conducted prior to demolition, it will be conducted on the building materials after demolition (as discussed below).

All sampling and analysis activities will be conducted in accordance with the procedures set forth in GE's latest approved Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP). The results of these characterization activities will be used to assess the overall condition of the building and to determine the need for, and scope and extent of, any debris segregation and consolidation that may be necessary.

In the event that GE proposes to use certain building demolition debris on-site, after crushing, as backfill or cover material, and such on-site use is allowed under an appropriate CD modification, GE will submit a specific building characterization sampling protocol to EPA for review and approval.

4 Demolition Activities

Following completion of the pre-demolition assessment/removal activities described in Section 2 and the characterization activities described in Section 3 (if any), GE will initiate building demolition activities. The demolition activities will be building-specific, and will consider the size, location, and condition of the building and any available characterization data. Based on this information, GE will develop an overall approach for the performance and sequencing of building demolition and related activities. Certain of these activities are discussed in further detail below.

Prior to initiating demolition activities, GE will abandon/relocate utilities (e.g., former process supply lines, sanitary sewer, storm sewer, potable and fire water supply, steam and condensate return piping, electrical, telephone/cable, etc.) as necessary to facilitate building razing. These activities will be performed, as appropriate, in accordance with utility owner specifications and requirements and applicable local, state, and federal codes and regulations. Utilities to be abandoned will be either: (1) cut, capped, and/or grouted in-place; or (2) removed and disposed of at an appropriate off-site disposal facility. For soils that will be disposed of at an off-site location disposal facility, GE will perform characterization activities in accordance with its Waste Characterization Plan (Attachment A to the POP). In the event that GE considers the possible re-use of the excavated soils as backfill – or if materials from an off-site location are utilized as backfill – the materials will be sampled as necessary and will be evaluated for their suitability for use as backfill in accordance with the procedures set out in GE's Soil Cover/Backfill Characterization Plan (Attachment B to the POP). If subgrade utilities will remain active in the area, GE will ensure specifically that the material to be used as backfill in such utility excavations meet the requirements specified in that plan for utility excavations, which are consistent with those provided in the CD and SOW.

Once all utilities have been abandoned/relocated, GE will raze the building structure. It is anticipated that such activities will be performed utilizing conventional construction equipment, including, but not limited to, bulldozers, excavators, cranes, backhoes, etc. Such activities will be performed in accordance with 310 CMR 7 and all other applicable local, state, and federal codes and regulations.

GE will conduct ambient air monitoring for particulates during activities that could potentially produce dust. (Such monitoring will be performed in addition to any other monitoring to be performed as part of the contractor's health and safety plan.) The ambient air monitoring will be conducted at a minimum of three monitoring locations to include at least one upwind and one downwind location. This particulate matter monitoring will be performed for approximately 10 hours daily (approximately 7:00 a.m. to approximately 5:00 p.m.) during each day of active demolition activities and will be conducted using the procedures and methods specified in Appendix G to GE's latest approved FSP/QAPP.

In addition, GE anticipates that where demolition activities could result in the generation of airborne PCBs, GE will conduct ambient air monitoring for PCBs at the same stations as for particulates. This monitoring will be conducted at a frequency of approximately one monitoring event for every four weeks (cumulative time basis) of active demolition activities, except that: (1) a minimum of one PCB air sampling event will be conducted for each building, even if the demolition activities occur in a timeframe less than four weeks; and (2) in the event that the overall active demolition activities are anticipated to be completed in a timeframe less than four weeks, one round of PCB air sampling will be performed. This monitoring will be performed using the PCB monitoring procedures and methods specified in Appendix G to the FSP/QAPP. As needed, GE will use appropriate methods for controlling dust emissions (e.g., water spray) during demolition activities.

The notification and action levels to be used in this ambient air monitoring program, as well as the actions to be taken in the event that those levels are exceeded, will be the same as those specified in GE's Ambient Air Monitoring Plan, which is Attachment D to the POP.

5 Evaluation of Debris for Deposition

Based on the results of the characterization activities described in Section 3, GE will determine whether the building materials subject to disposition contain (or are assumed to contain) PCBs at concentrations at or above 50 ppm and thus are required to be disposed of at a TSCA-authorized facility, or whether they contain PCBs at concentrations less than 50 ppm and thus are considered to be not subject to TSCA disposal regulations. This applies to building materials not identified for on-site consolidation disposal in building foundations. In making that determination, GE may determine an average PCB concentration for particular portions or categories of the building materials (e.g., materials from a given story or segment of the building), based on the available PCB data and demolition techniques (e.g., whether multiple stories or building segments were collapsed together or were segregated during demolition), to the extent consistent with the requirements of the off-site disposal facility(ies). In the event that additional PCB sampling is needed to make that determination so as to satisfy the requirements of the off-site disposal facility(ies), such sampling will be conducted.

In addition to determining the PCB concentrations of the building material, the TCLP analytical data available for that building (or portion thereof) will be reviewed to determine whether the demolition materials (or a portion thereof) would constitute hazardous waste under RCRA. If such sampling was not conducted prior to demolition or if additional evaluations are required by the disposal facility to assess whether the material constitutes hazardous waste, the necessary additional sampling will be conducted to meet the requirements of the disposal facility.

6 Disposition of Demolition Debris

If a given set of building demolition debris contains an average PCB concentration less than 50 ppm and does not constitute hazardous waste under RCRA, it may be transported to an off-site non-TSCA, non-RCRA disposal facility (subject to any other requirements imposed by that facility). For demolition debris that contains or is assumed to contain an average PCB concentration at or above 50 ppm or is classified as hazardous waste under RCRA, GE will transport such debris to an off-site disposal facility authorized under TSCA and/or RCRA to receive and dispose of such material.

As previously noted, in the event that GE wishes to use some portion of the building demolition debris on-site as backfill or cover material, and such on-site use is allowed under an appropriate CD modification, GE will submit a proposal for such use to EPA for review and approval.[2]

7 Post-Demolition Activities

Post-demolition activities to be conducted by GE will include, but not be limited to, the placement of gravel borrow materials and/or concrete, as needed, to bring the final base surface up to grade so that it is suitable for its intended use. Any fill material used to prepare that surface will be sampled and evaluated for its suitability for such use in accordance with the procedures set out in GE's Soil Cover/Backfill Characterization Plan (Attachment B to the POP).

Following the completion of post-demolition activities, GE will provide documentation regarding the pre-demolition, demolition, debris disposition, and post-demolition activities – including relevant analytical data, photographs, and waste disposition quantities – in an appropriate completion report for the project.

8 References

Arcadis (Arcadis U.S., Inc.). 2022. Buildings 12 and 14 Complexes Demolition, Disposition, and Restoration Work Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. December 23.

GE (General Electric Company). 2020. Letter from A Silfer (GE) to D Tagliaferro (EPA). re: GE-Pittsfield/Housatonic River Site, East Street Area 2-North (GECD140), Agreement on Consolidation of Certain Building Demolition Materials in Foundations of Buildings 12, 12X, and 12Y. January 31.

[2] As previously noted, as authorized by the Non-River SOW and in accordance with a January 31, 2020 agreement with EPA and a December 2022 work plan (conditionally approved by EPA on January 31, 2023), certain demolition debris generated from the demolition of the former Building 12 and 14 Complexes will be consolidated in the foundations of Buildings 12, 12X, and 12Y and will be sealed with a cover system. This previously authorized and approved demolition and disposition project, which is currently in the pre-demolition removal and preparation phase, is not covered by these Building Demolition Protocols.

Attachment B

Soil Cover/Backfill Characterization Plan

General Electric Company

Soil Cover/Backfill Characterization Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

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Table

Abbreviations

Appendix IX+3 VOCs, SVOCs, and metals	VOCs, SVOCs, and metals listed in Appendix IX of 40 Code of Federal Regulation 264, plus benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine
Arcadis	Arcadis U.S., Inc.
CD	Consent Decree
EPA	United States Environmental Protection Agency
FSP/QAPP	Field Sampling Plan/Quality Assurance Project Plan
GE	General Electric Company
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
mg/kg	milligrams per kilogram
Non-River SOW	Statement of Work for Removal Actions Outside the River
PCB	polychlorinated biphenyl
POP	Project Operations Plan
PRG	Preliminary Remediation Goal
RD/RA	Remedial Design/Remedial Action
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
ROR	Rest of River
SIP	Supplemental Information Package
Site	GE-Pittsfield/Housatonic River Site
SOW	Statement of Work
SVOC	semi-volatile organic compound
UDF	Upland Disposal Facility
VOC	volatile organic compound

1 Introduction

This revised Soil Cover/Backfill Characterization Plan, which is Attachment B to the revised Project Operations Plan (POP), outlines the procedures that the General Electric Company (GE) will use to evaluate potential sources of soil or sediment cover and backfill material for response actions to be conducted at the GE-Pittsfield/Housatonic River Site (the Site) under a Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MassDEP), and other government agencies in October 1999 and entered by the United States District Court in Massachusetts on October 27, 2000 (EPA and GE 2000). On January 25, 2024, GE submitted a revision of the Soil Cover/Backfill Characterization Plan that had been included in GE's July 2013 POP (Arcadis 2013), which had previously been prepared and approved by EPA under the CD and which applied to the Removal Actions that GE was then obligated to perform under the CD (most of which have been completed). That revised Soil Cover/Backfill Characterization Plan, which was included in GE's January 2024 POP (Arcadis 2024a), also constituted a characterization plan for soil or sediment cap/cover and backfill material to be used in activities that are being, and will be, conducted by GE at the Rest of River (ROR) portion of the Site as part of the ROR Remedial Action pursuant to a Revised Resource Conservation and Recovery Act Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020). The ROR is that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. EPA provided conditional approval of and comments on the January 2024 POP, including the Soil Cover/Backfill Characterization Plan, on July 22, 2024, directing GE to submit a further revised plan. This document constitutes that further revised Soil Cover/Backfill Characterization Plan.

This plan describes the general procedures that GE will use to characterize and evaluate materials (including both off-site and on-site materials) for potential use as cap/cover or backfill material for: (1) any future activities at the Site associated with the Removal Actions and other non-ROR activities under the CD and/or the associated Statement of Work for Removal Actions Outside the River (Non-River SOW; Appendix E to the CD); and (2) the ROR Remedial Action under the Revised Permit. Certain response actions, including the ROR Remedial Action, will require the excavation of sediments and/or soils to achieve the applicable Performance Standards.[1] Subsequent to that removal, the affected areas will require capping or restoration, which will typically involve the placement of a sediment cap, other engineered cover, or backfill material. In addition, materials will be required for construction of an Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area as part of the ROR Remedial Action.

As discussed herein, the acceptability of the potential material for a cap/cover or backfill will be dependent on three primary criteria: (1) its physical and geotechnical characteristics and overall suitability for the intended use; (2) its chemical characteristics (i.e., the presence and concentrations of PCBs and other constituents in the candidate materials); and (3) its potential role in achieving the applicable Performance Standards for the subject response action. The selection and evaluation of cap/cover or backfill materials will be addressed in the appropriate technical design submittals for the specific response action.

[1] The Performance Standards for the Removal Actions for Areas Outside the River are set forth in the CD and the Non-River SOW. The Performance Standards for the ROR Remedial Action are set forth in the Revised Permit and summarized in Section 2 of the Final Revised Rest of River Statement of Work (Anchor QEA et al. 2021).

2 Characterization of Potential Cap/Backfill Materials

As potential sources of cap/cover or backfill materials are identified, GE (including GE's contractors or subcontractors) will evaluate each borrow source using the general characterization procedures described in this section and the subsequent assessment activities described in Section 3 of this plan. The characterization of a candidate borrow source will initially involve a qualitative review of the potential source, followed by analytical testing to evaluate the material's chemical and (if appropriate) geotechnical properties. These characterization procedures are described below. The results of initial characterization will be presented to EPA for review and approval of the candidate material source. To be used, the material source must have been approved by EPA within the prior 18 months or characterization testing results generated within the prior 18 months must indicate that material from the subject source is consistently in compliance with the chemical criteria presented in Section 3 unless such testing is deemed unnecessary by EPA.

To date, the soil cover and backfill materials that have been used by GE have originated primarily from off-site locations. GE anticipates that similar off-site materials will continue to be used to construct engineered caps or covers and/or to restore excavation areas, including as part of the ROR Remedial Action. However, as discussed herein, GE may propose (in the technical design submittals for a given response action) to use existing materials from within the Site, including excess soils removed from the GE property where the UDF is being constructed, as capping or backfill material under certain conditions.

2.1 Initial Borrow Source Assessment

As potential sources of fill/soil or cap material are identified, GE will conduct an initial assessment (if not previously conducted) to evaluate whether the materials at the borrow source are potentially suitable for use subject to further evaluation through sampling and analysis. This assessment will likely include some or all of the following: a field visit to evaluate the materials and the location of the materials and discussions with the owner of the materials or the property owner regarding the origin of the materials, the historical use of the borrow source area, and any chemical/physical characterization data that may already exist for the material at the source. The level of detail involved in this initial assessment will depend on the candidate materials and will be limited if the potential materials are undisturbed in-place materials. If the initial assessment indicates that the materials at the borrow source are potentially usable and thus warrant further evaluation, GE will arrange for sampling and analytical testing of the potential materials as described in Sections 2.2 and 2.3.

2.2 Chemical Characterization Sampling

If the results of the initial assessment indicate that the candidate borrow source and materials may be suitable for use, GE will collect a representative sample(s) of the materials for chemical characterization via laboratory analyses. The chemical characterization sampling and testing will apply to imported soils and granular materials (e.g., topsoil, sand, and gravel). Chemical characterization will not be required for stone materials (e.g., riprap, cobbles, and boulders) provided that those materials are from a source found to be acceptable from the initial borrow source assessment described in Section 2.1.

The specific laboratory analyses for the chemical characterization will be consistent with the testing that GE has performed to date for various completed/ongoing remedial programs. Specifically, representative samples will be analyzed for PCBs[2] and the volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals listed in Appendix IX of 40 Code of Federal Regulation 264, plus benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (Appendix IX+3 VOCs, SVOCs, and metals) or in accordance with the project-specific work plan. Each borrow source material sample collected for chemical characterization testing will also be screened using a photoionization detector (PID) as described in Appendix A2 (Standard Operating Procedure for Photoionization Detector Field Screening) of GE's revised Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), submitted to EPA on December 21, 2023 (Arcadis 2023) and approved by EPA on March 21, 2024, to verify the materials do not contain elevated levels of volatile organic vapors. All samples will be collected, analyzed, and validated in accordance with that revised FSP/QAPP or any EPA-approved revision of that document.

The frequency of sampling and testing required will depend on the source/location of the potential material as specified below, unless alternate procedures are described in the technical design documents for the associated response action.

- **For candidate material from an undisturbed in-place source (e.g., an active gravel/borrow pit)**: The source will provide a letter certifying that the material is virgin, and one representative sample of the material will be collected and analyzed. The analytical data from this chemical characterization will be compared with the criteria described in Section 3.1 and submitted to EPA for approval prior to use as part of the response action. The results of this sample will be considered to represent the materials that originate from this virgin source up to 20,000 cubic yards of material from the borrow source, until such time as the physical characteristics of the source location significantly change.

  In situations where a large volume of material (more than 20,000 cubic yards) is anticipated to be used as cap/cover or backfill material (which may occur in implementing the ROR Remedial Action), additional periodic sampling of the imported material will be conducted following the initial characterization. Specifically, if more than 20,000 cubic yards is obtained from an approved undisturbed in-place backfill source, then, following the initial chemical characterization sampling, additional periodic chemical characterization sampling will continue to be performed at a frequency of one representative sample per 20,000 cubic yards (or less if the additional material is less than that amount) for comparison with the chemical criteria described in Section 3.1. If the analytical results for this additional sampling indicate that those criteria are met, the imported material will be approved for use as part of the response action and separate EPA approval will not be required.

- **For off-site materials that have not been certified as a virgin source**: The frequency of initial borrow source characterization testing will involve the collection of one sample for each 2,000 cubic yards from the borrow source and for each distinct material type specified in the technical design documents. If the volume of material to be characterized is less than 2,000 cubic yards, one sample will still be collected from that material. For the majority of analyses, each sample will be a composite of 10 discrete "grab" subsamples that will be collected at spatially distributed locations within the source material and composited into a single sample to be submitted to a laboratory for the appropriate chemical analyses listed above. A PID headspace screening will be performed for all 10 subsample locations used to form the composite sample. However, for analysis of VOCs, each sample will be a single discrete grab sample collected at one of the 10 subsample locations used to form the composite sample. The analytical data from this chemical characterization will be compared with the criteria described in Section 3.1 and submitted to EPA for approval prior to use as part of the response action. This

[2] Reference herein to analysis for PCBs in this Attachment B means analysis for PCB Aroclors.

initial sampling frequency will be used to characterize up to 20,000 cubic yards of material from the borrow source.

In situations where more than 20,000 cubic yards are anticipated to be used as cap/cover or backfill material, additional periodic sampling of off-site materials not certified as a virgin source will be conducted following the initial characterization. Specifically, if more than 20,000 cubic yards are obtained from an approved backfill source that is not certified as a virgin source, then, following the initial chemical characterization sampling, additional periodic chemical characterization sampling will be performed at a frequency of one sample (either composite or grab, based on intended analysis, as described above) per 7,500 cubic yards (or less if the additional material is less than that amount) from each distinct borrow source and for each distinct material type specified in the technical design documents. Based on the results from this sampling, GE may request approval from EPA to reduce this volume-based characterization sampling frequency to a rate of up to one sample per 20,000 cubic yards. For this additional sampling, each composite sample, as required for the majority of analyses, will be composed of 10 grab subsamples that are collected at spatially distributed locations within the source material and composited into a single sample for analysis. The PID headspace screening will be performed for all 10 subsample locations used to form the composite sample; and for analysis of VOCs, each sample will be a single discrete grab sample collected at one of the 10 subsample locations used to form the composite sample.[3] Upon receipt of the additional chemical characterization data, the data will again be compared with the chemical criteria described in Section 3.1. If the analytical results for this additional sampling indicate that those criteria are met, the imported material will be approved for use as part of the response action and separate EPA approval will not be required.

All chemical characterization data for the imported material will be maintained in the project files and reported as part of the Interim Remedial Action Completion Report for each ROR Remediation Unit or other applicable completion report for the response action. If the chemical testing and geotechnical testing of material from a borrow source indicate frequent and consistent compliance with the chemical criteria in Section 3.1, GE may propose (for EPA review and approval) to reduce the sampling frequency or otherwise modify the characterization procedures described herein for that material type and borrow source.

As previously indicated and as discussed in Section 3.2, GE may also propose that existing materials from within the Site, including from the UDF property, be used as cap/cover and/or backfill materials (subject to certain conditions). In that event, it is anticipated that sufficient analytical data will be available to characterize the candidate material, primarily as a result of the pre-design investigations performed for the specific response action. Notably, soils at the UDF property that will be excavated for construction and stockpiled for potential re-use during the ROR Remedial Action were characterized as part of the UDF pre-design investigation. If the available analytical data are determined not to be sufficient, additional characterization data will be obtained, as needed, for the proposed on-site material. In any case, existing data from on-site materials proposed for use as cap/cover or backfill material will be submitted to EPA for approval prior to use as part of the response action.

2.3 Geotechnical Characterization Sampling

Depending on the specific area of the Site and response action(s) to be conducted, the physical characteristics and geotechnical parameters of the potential cap/cover, backfill, or UDF construction materials may be an important consideration in terms of its potential use. The geotechnical and other material specifications and the associated characterization requirements for engineered cap materials and backfill materials to be used in a response action, including the ROR Remedial Action, will be presented in the relevant technical submittals and specifications for that

[3] For purposes of determining required sample frequency, the volume of material represented by one sample will be estimated at the source and confirmed at the point of placement.

response action (e.g., the Final Remedial Design/Remedial Action [RD/RA] Work Plan or Supplemental Information Package [SIP] for each ROR Remediation Unit and the revised Final Design Plan or SIP for the UDF). As necessary, samples of a potential cap/cover and/or backfill material will be collected and analyzed for the specified parameters to determine whether that material meets the applicable technical specifications and requirements.

2.4 Future Characterization Activities

Depending on the availability and volume of a candidate material (once it has been initially characterized, established as being suitable for use by GE, and approved by EPA), it is possible the source will be used for several areas of the Site, including more than one ROR Remediation Unit, over an extended period of time. To verify that the characterization of the source has not changed, the same type of sampling and analyses described in Section 2.2 (i.e., sampling at the same frequency and for the same constituents used in the initial characterization of material from that source) will be conducted at a minimum of every 18 months for continuous use of the same source, unless such additional testing is deemed unnecessary or is more limited by the design engineer and EPA or characterization testing results generated within the prior 18 months indicate that material from the subject source are consistently in compliance with the specified criteria.

Additionally, notwithstanding the timing associated with the use of a particular material, GE will perform sampling and analysis for a previously characterized material if it is established that the physical characteristics of the material have significantly changed. In the event that a chemical release occurs at or near a previously characterized source location, GE will re-evaluate the continued use of that source. If, based on this evaluation, GE determines that continued use of the material is warranted, GE will collect representative samples of materials from the area potentially affected by the release and perform laboratory analysis to confirm its suitability for continued use. GE will provide EPA with the analytical results from such re-sampling for review and approval prior to use of the material from the affected area.

3 Evaluation of Chemical Characterization Data for Potential Source Materials

Available chemical characterization data will be evaluated to determine whether the material can be used as part of the response action and, if acceptable, any limitations regarding its use. This evaluation is necessary only if the potential source of cap/cover and/or backfill material is considered suitable from a geotechnical perspective.

The primary considerations involved in evaluating the chemical characterization data to determine suitability for use include the origin of the material (i.e., whether the material will be brought to the Site from an off-site location or whether the materials currently exist within the Site) and the presence and concentrations of PCBs and non-PCB constituents. Section 3.1 describes the PCB and non-PCB criteria that will be applied to materials originating from off-site locations, and Section 3.2 describes the conditions for use of existing materials from within the Site and the PCB and non-PCB criteria that will be applied to such materials. In both cases, different criteria have been established for (1) the use of such materials in CD areas other than the ROR, including any remaining activities associated with the prior Removal Actions under the Non-River SOW and (2) the use of such materials in connection with the ROR Remedial Action, including at the UDF, since the applicable Performance Standards differ between these activities.

3.1 Off-Site Sources

Based on the materials that have been characterized to date, it is not expected that detectable levels of PCBs, VOCs, or SVOCs, or concentrations of metals greater than background will be present in cap/cover or backfill materials that originate from an undisturbed, off-site, in-place source. In any event, as described in Section 2, chemical characterization testing will be performed for material generated at off-site borrow sources to verify that the materials are in compliance with the criteria described below.

3.1.1 PCB Criteria

3.1.1.1 Future CD Activities Other Than the ROR Remedial Action

Cap/cover and backfill materials originating from an off-site location will be acceptable for use in activities under the CD apart from the ROR Remedial Action, including any remaining activities associated with the prior Removal Actions under the Non-River SOW, if the following criteria are met: (1) the candidate material does not contain any PCB concentrations exceeding 2 milligrams per kilogram (mg/kg), which is the lowest numerical PCB Performance Standard for soil contained in the CD and Non-River SOW; and (2) the use of such material will allow the response action to achieve the applicable PCB Performance Standards for that response action.

3.1.1.2 ROR Remedial Action

For the ROR Remedial Action, cap/cover and backfill materials originating from an off-site location will be acceptable for use without limitation if the candidate material does not contain PCB Aroclor concentrations exceeding 0.021 mg/kg,[4] or, for material used in construction of the UDF, the level(s) specified in the relevant technical submittals

[4] This PCB criterion is based on the arithmetic average concentration of PCBs in previously sampled backfill sources using one-half the detection limit for non-detect results (as indicated in Table 2 of GE's Proposed Backfill Data Set for CD Sites, dated March 11, 2003). It constitutes the value assumed for the replacement soil concentrations to represent clean backfill in the calculation of Exposure Point Concentrations (EPCs) for soils in non-residential areas and spatial average PCB concentrations for residential area soils as part of the ROR Remedial Action.

and specifications, including Section 31 05 13 – Soils for Earthwork of the UDF Final Design Plan, as revised and approved.[5]

3.1.2 Criteria for Non-PCB Constituents

As described in Section 2.2 of this plan, in addition to analysis for PCBs and certain geotechnical parameters, candidate cap/cover and backfill materials will be analyzed for Appendix IX+3 VOCs, SVOCs, and metals. Any detectable levels of these non-PCB constituents will be evaluated using the procedures described below.

3.1.2.1 Future CD Activities Other Than the ROR Remedial Action

For activities under the CD apart from the ROR Remedial Action, including any remaining activities associated with the prior Removal Actions under the Non-River SOW, the evaluation of VOCs, SVOCs, and metals in a potential soil cover or backfill material will generally follow the procedures described in Technical Attachment F to the Non-River SOW (Protocols for the Evaluation of Non-PCB Constituents in Soil). The analytical data for these constituents in the candidate material will initially be compared with the values listed in Exhibit F-1 to Technical Attachment F, which are based on the then-applicable EPA Region 9 Preliminary Remediation Goals (PRGs).[6] For this evaluation, the residential PRGs listed in Exhibit F-1 will be used for material being considered for use in residential or recreational areas, and the industrial PRGs listed in Exhibit F-1 will be used for material being considered for use in commercial/industrial areas. For certain constituents for which Region 9 PRGs did not exist, surrogate PRGs for similar chemicals will be used as described in Attachment F to the SOW. The Region 9 PRGs in Exhibit F-1 and these surrogate PRGs are referred to jointly as "Screening PRGs." Specifically, the maximum concentration of each constituent in the candidate material will be compared to the applicable Screening PRG. If the maximum concentration of each such constituent is less than the applicable Screening PRG, the material will be considered suitable for use without limitation in its intended application (i.e., at residential/recreational areas or commercial/industrial areas, depending on which set of PRGs was used).

If the candidate material contains Appendix IX+3 VOCs, SVOCs, or metals at maximum concentrations that exceed the Screening PRGs, GE may further evaluate the material for potential use as cap/cover or backfill material. Specifically, for each constituent that requires further evaluation following the comparison to Screening PRGs, an average concentration of that constituent will be determined either: (a) for the candidate cap/cover or backfill materials proposed for use in a particular areas; or (b) for the averaging area where those materials will be used, based on non-PCB data for the existing soils that will remain after the response actions have been conducted (if such data are available), together with data associated with the candidate material. In the latter case, GE will calculate separate average concentrations for surface soils and subsurface soil (using depth increments consistent with those evaluated for PCBs for the area).

The average constituent concentrations, calculated as described above, will be then compared to the applicable Massachusetts Contingency Plan (MCP) Method 1 soil standard (S-1, S-2, or S-3), as amended (or, if a MCP Method 1 standard does not exist, a derived Method 2 standard). In determining the applicable set of Method 1 (or 2) standards (i.e., S-1, S-2, or S-3), as amended, GE will follow the MCP criteria for categorizing soil in the area

[5] The UDF Final Design Plan was initially submitted to EPA in February 2024 (Arcadis 2024b) and conditionally approved by EPA on September 12, 2024. In response to that conditional approval, GE will revise the UDF Final Design Plan and will submit the revised plan to EPA by December 20, 2024.

[6] Although these Region 9 PRGs are now referred to as Regional Screening Levels (RSLs) and those RSL were updated in June 2015, the prior Region 9 PRGs will be used in these analyses because they are specified in the Non-River SOW and were used in prior Removal Actions Outside the River. Their continued use is thus consistent with the conservative non-PCB levels that were allowed to be present in the soils in these areas under the Non-River SOW.

where the material will be used. If the average concentrations of VOCs, SVOCs, and metals in the candidate material or in the response action area are less than the applicable MCP Method 1 (or 2) soil standards, the candidate material will be considered acceptable for use in its intended application.

3.1.2.2 ROR Remedial Action Areas

For the ROR Remedial Action, cap/cover and backfill materials originating from an off-site location will be acceptable for use without limitation if the candidate material does not contain any detectable VOCs or SVOCs (using the applicable reporting limit), and the concentrations of metals/inorganics are less than the site-specific criteria listed in Table B-1 (and described below) where the laboratory detection limits are less than the specified criteria, or, for material used in construction of the UDF, concentrations are less than levels specified in the relevant technical submittals and specifications, including Section 31 05 13 – Soils for Earthwork of the UDF Final Design Plan or SIP, as revised and approved. Exceptions to these criteria may be considered if common laboratory contaminants are detected (e.g., acetone, methylene chloride, and bis[2-ethylhexyl]phthalate).

The criteria for metals/inorganics in Table B-1 were based on the lower of the MCP Method 1 standards for S-1/GW-3 soil (updated in 2019)[7] or the 2006 MassDEP Freshwater Sediment Screening Values (MassDEP 2006) – except that where such levels are lower than the background concentration published by MassDEP for "natural" soils (MassDEP 2002), the background concentration was used as the criterion.

Table B-1: Criteria for Metals/Inorganics in Cap/Cover/Backfill Material for the ROR Remedial Action

Metal	Criterion (mg/kg)	Basis
Antimony	20	MCP Method 1 Standard for S-1/GW-3 Soil
Arsenic	20	MCP Method 1 Standard for S-1/GW-3 Soil
Barium	1,000	MCP Method 1 Standard for S-1/GW-3 Soil
Beryllium	90	MCP Method 1 Standard for S-1/GW-3 Soil
Cadmium	5	MassDEP Freshwater Sediment Screening Value
Chromium (total)	100	MCP Method 1 Standard for S-1/GW-3 Soil
Copper	150	MassDEP Freshwater Sediment Screening Value
Cyanide (total)	30	MCP Method 1 Standard for S-1/GW-3 Soil
Lead	130	MassDEP Freshwater Sediment Screening Value
Mercury	0.18 (for sediment backfill)[8] 0.3 (for soil backfill)	MassDEP Freshwater Sediment Screening Value MassDEP Soil Background Value
Nickel	49	MassDEP Freshwater Sediment Screening Value
Selenium	400	MCP Method 1 Standard for S-1/GW-3 Soil
Silver	100	MCP Method 1 Standard for S-1/GW-3 Soil
Thallium	8	MCP Method 1 Standard for S-1/GW-3 Soil
Vanadium	400	MCP Method 1 Standard for S-1/GW-3 Soil
Zinc	460	MassDEP Freshwater Sediment Screening Value

[7] Under the MCP, the Method 1 standards for S-1/GW-3 soil are protective for soils in residential and other unrestricted use areas (S-1) and for potential discharge from the soils to surface water (GW-3).

[8] If GE cannot find a source of sediment backfill that meets the 0.18 mg/kg criterion, GE may propose for EPA approval an alternative criterion up to the MassDEP Soil Background Value of 0.3 mg/kg for mercury.

3.2 On-Site Sources

Depending on the specific response action(s), GE may propose for EPA review and approval – in the technical RD/RA submittals for a given response action – to use existing excavated site soils (or to use crushed building demolition debris from the Site if authorized by the CD or a CD modification in lieu of materials originating from an off-site location. Use of such existing site materials may be appropriate in certain situations. For example, the excavations for the construction of the UDF will produce a large amount of non-contaminated soils that could potentially be used as cap/cover or backfill material for the ROR Remedial Action. In other instances, soil containing chemical constituents at low or non-detectable levels may need to be removed to gain access to underlying soils that contain higher levels of contamination but would be entirely suitable for use as backfill. In additional cases, certain soils may need to be removed to achieve the Performance Standards for a given depth increment (e.g., the top foot) but would meet the Performance Standards for a deeper increment and thus could be suitable for use as backfill for that deeper increment. In these situations, it may be more efficient (and sustainable) to use such site soils as cap/cover and/or backfill material rather than transporting them to an off-site location and bringing in off-site material to use for cover and/or backfill.[9]

In consideration of the above factors, GE may, under the following conditions and with EPA approval, use existing site material, including material from the UDF property, as cap/cover and/or backfill material if such material meets the applicable geotechnical criteria and the PCB and non-PCB criteria described below.

3.2.1 PCB Criteria

Site material, including material from the UDF property, will be considered acceptable for use as cap/cover or backfill material if such material meets the same PCB criteria specified in Section 3.1.1.1 for use in non-ROR activities or Section 3.1.1.2 for use in the ROR Remedial Action.

In addition, site material will be considered acceptable for use as backfill associated with future utility excavations outside the ROR if: (1) the use of such material is consistent with and will allow the response action to achieve the applicable PCB Performance Standards at the response action area in question; and (2) the PCB concentrations in the candidate material do not exceed the PCB Performance Standards set forth in the CD and the Non-River SOW for backfill material associated with future utility installations or repairs, namely (a) an average concentration of 25 ppm at industrial/commercial areas or (b) average concentrations of 10 ppm for the top three feet and 25 ppm for deeper depth increments at recreational areas.

3.2.2 Criteria for Non-PCB Constituents

The evaluation of VOCs, SVOCs, and metals/inorganics in a potential cap/cover or backfill or cover material originating from within the Site, including material from the UDF property, will follow the same procedures and criteria described in Section 3.1.2.1 for use in non-ROR activities or Section 3.1.2.2 for use in the ROR Remedial Action.

[9] Crushed building demolition debris may be used only as authorized by the CD or an appropriate modification of the CD. Note that use of the crushed building debris currently being consolidated in the foundations of Buildings 12, 12X, and 12Y at the former GE facility under a January 2020 agreement with EPA was authorized by the Non-River SOW (part of the CD). Since that project has previously been authorized and approved by EPA, it is not covered by this revised Soil Cover/Backfill Characterization Plan.

4 References

Anchor QEA (Anchor QEA, LLC), AECOM, and Arcadis (Arcadis U.S., Inc.). 2021. Final Revised Rest of River Statement of Work. Prepared for General Electric Company, Pittsfield, Massachusetts. September 14.

Arcadis. 2013. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised July.

Arcadis. 2023. Field Sampling Plan/Quality Assurance Project Plan – GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company. Revised December 21.

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Attachment C

Site Management Plan

General Electric Company

Site Management Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

Table of Contents

Abbreviations

Arcadis	Arcadis U.S., Inc.
CD	Consent Decree
EPA	United States Environmental Protection Agency
GE	General Electric Company
HASP	Health and Safety Plan
MassDEP	Massachusetts Department of Environmental Protection
NAPL	non-aqueous-phase liquid
OMM Plan	Operation, Monitoring, and Maintenance Plan
POP	Project Operations Plan
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
RD/RA Work Plan	Remedial Design/Remedial Action Work Plan
ROR	Rest of River
RU	Remediation Unit
Site	GE-Pittsfield/Housatonic River Site
SIP	Supplemental Information Package
UDF	Upland Disposal Facility

Attachment C
Site Management Plan

1 Introduction

This revised Site Management Plan, which is Attachment C to the revised Project Operations Plan (POP), describes the site management and security measures to be implemented by the General Electric Company (GE) and its contactors during its performance of response actions at the GE-Pittsfield/Housatonic River Site (Site) under a Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MassDEP), and other government agencies in October 1999 and entered by the U.S. District Court in Massachusetts on October 27, 2000 (EPA and GE 2000). On January 25, 2024, GE submitted a revision of the Site Management Plan that had been included in GE's July 2013 POP (Arcadis 2013), which had previously been prepared and approved by EPA under the CD and which applied only to the Removal Actions that GE was obligated to perform under the CD (most of which have been completed). That revised Site Management Plan, which was included in GE's January 2024 POP (Arcadis 2024a), applied to the remaining Removal Actions that had not been completed (namely, those for Groundwater Management Areas [GMAs] 1, 3, and 4, as defined in the CD). It also applied to the activities that are being, and will be, conducted by GE at the Rest of River (ROR) portion of the Site as part of the ROR Remedial Action pursuant to a Revised Resource Conservation and Recovery Act Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020). The ROR is that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. EPA provided conditional approval of and comments on the January 2024 POP, including the Site Management Plan, on July 22, 2024, directing GE to submit a further revised plan. This document constitutes that further revised Site Management Plan.

This revised Site Management Plan describes security measures (both physical and operational), as well as operational practices, that will be implemented to minimize the potential for physical access to and contact with hazardous waste or hazardous materials, structures, or equipment during the performance of: (1) future activities at the Site associated with the remaining Removal Actions at GMAs 1, 3, and 4 under the CD; and (2) the ROR Remedial Action under the Revised Permit, including remediation and support activities in the ROR and construction and operation of an Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area. These activities will include various sampling and data collection activities conducted under the CD or as part of the ROR Remedial Action and remediation and restoration of ROR sediments, riverbanks, and floodplain soils, as well as construction and operation of the UDF and performance of additional activities as needed to meet applicable Performance Standards set forth for the ROR Remedial Action in the Revised Permit. In addition, if so provided in the applicable project-specific work plan, this Site Management Plan will apply to other response actions conducted by GE at the Site under the CD, such as future projects involving the disposition of building demolition debris.[1] In developing this plan, the general types of activities (e.g., pre-design investigations, construction activities), as well as the location and physical features of each work area (e.g., areas that are or will be within GE-owned and GE-controlled property), were considered.

Section 2 of this plan identifies the types of activities anticipated to be conducted by GE as part of the response actions required by the CD or the Revised Permit. It also describes the general responsibilities of GE and its representatives in the implementation of site management activities. Section 3 describes the various security measures and management operations that currently exist and/or will be implemented during the response actions subject to this plan.

[1] This plan does not apply to the current project involving the completed demolition of the former Building 12 and 14 Complexes at the former GE Pittsfield facility and the ongoing consolidation of the resulting demolition debris in the foundations of Buildings 12, 12X, and 12Y – which was authorized under the CD and previously approved by EPA.

2 Applicability of Site Management Plan

This Site Management Plan focuses on those activities for which there is a reasonable potential for public interaction based on the location of the response action; the type, duration, and timing of the various response actions; physical site features and access limitations; and any security measures and controls that are currently in place. The response actions to be performed vary in type, scope, and duration for the different geographic portions of the Site and also vary based on the phase of the action (e.g., pre-design activities, remedial construction activities). For example, although investigations often cover large portions of the Site, remediation actions (e.g., soil or sediment removal, installation of a soil or sediment cover) generally occur within smaller areas and/or have a long duration. Therefore, the site management activities described herein may require modification to reflect the specific areas subject to future response actions as details related to the response actions are evaluated and determined during the project planning and design. Any modifications will be identified in the technical submittals for the specific response action, such as the Remedial Design/Remedial Action (RD/RA) Work Plans and Supplemental Information Packages (SIPs) for the Remediation Units (RUs) that are part of the ROR Remedial Action[2] and the Final Design Plan for the UDF.

2.1 Response Action Activities

Several types of response action activities are addressed by this Site Management Plan, including those performed as part of the ROR Remedial Action, which will occur over multiple years and involve active remediation across approximately 30 miles of the Housatonic River, with support areas and temporary access roads constructed and operated on several properties. A general (non-exhaustive) description of anticipated response action activities is provided below.

- **Pre-Design and Other Investigations** – These include activities such as advancement of soil borings; pre-design groundwater monitoring well installation; soil, sediment, groundwater, porewater, and/or surface water sampling and laboratory analyses; and/or surveying activities.
- **Groundwater Monitoring** – This includes such activities as the installation of groundwater monitoring wells, groundwater elevation measurements, recovery of non-aqueous phase liquid (NAPL), and/or groundwater sampling and laboratory analyses.
- **Remedial Construction** – This includes such activities as mobilization (e.g., delivery of construction equipment, backfill or soil cover materials, and/or personnel to the Site), access and site preparation, best management practice deployment, soil excavation, sediment excavation/dredging, material handling and stockpiling, backfilling, construction of a surface cover or sediment caps, application of amendments to reduce bioavailability of contaminants, restoration activities, construction and use of temporary support activities (i.e., access roads and staging areas), and demobilization.
- **Transportation and Disposal** – This includes activities such as the transportation of materials to staging, storage, or treatment areas at the Site or to the on-site UDF or off-site disposal facilities, as well as construction and operation of the UDF.[3]

[2] The RUs that are part of the ROR Remedial Action were identified in GE's Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures (Anchor QEA 2022), approved by EPA on July 6, 2022. They correspond generally to the reaches of the ROR as designated by EPA,

[3] The On-Plant Consolidation Areas at the GE facility, which were previously used for consolidation of waste materials, have been closed.

- **Construction Monitoring** – This monitoring includes evaluating compliance with air, noise, odor, lighting, and water quality standards, as applicable, within the designated areas subject to response actions and/or on adjacent properties not specifically part of the response action(s). For the ROR Remedial Action, the applicable quality-of-life standards for air, noise, odor, and lighting can be found in GE's revised Quality of Life Compliance Plan (Anchor QEA and Arcadis 2024), submitted on November 22, 2024; and water quality standards are included in the revised Construction Monitoring Plan, which is Appendix G to the revised POP . Applicable standards for response actions other than the ROR Remedial Action can be found in technical submittals for the response action in question.
- **Response Actions to Address Quality-of-Life Impacts** – This category includes routine control measures and continency response actions to address potential air, noise, odor, lighting impacts in accordance with the applicable quality-of-life standards.

In addition to the activities listed above, a key component of the Site Management Plan is the coordination of visitors to the Site during performance of the response actions. Potential visitors may include EPA and MassDEP personnel and their contractors, GE employees and consultants, prospective contractors, public officials, landowners, tenants, and members of the community or the general public. Visitor access is discussed in Section 3.3.3.

2.2 Site Management Responsibilities

Given the number, different types, and geographic extent of properties within the Site and the range of potential response actions, the contents of this Site Management Plan are necessarily general and subject to further definition (as needed) in the RD/RA Work Plans and SIPs for the RUs or other technical submittals for the individual response actions. As a result, individual site management responsibilities cannot be specified herein for all the different response actions. In general, GE (and, where appropriate, the remediation contractor) will be responsible for implementation of the activities described in this Site Management Plan and for compliance with the requirements of this plan. However, for some response actions, GE may designate one or more other entities to serve as GE's representative(s) for the purpose of performing certain site management functions. Such entities are referred to in this plan as "GE's Representatives." Further information regarding site management responsibilities is presented below.

For each RU or other response action and for activities at the UDF area, GE will assign a Project Manager who will serve as the primary point of contact for all phases of the response action. The general site management responsibilities of the GE Project Manager include the following:

- Ensure that activities are conducted in conformance with this Site Management Plan and other components of the POP;
- Coordinate with on-site personnel involved in the response actions concerning security, site control, work practices, etc.;
- As appropriate, arrange for security patrols of work areas during inactive periods; and
- Ensure that measures taken in accordance with this Site Management Plan are consistent with and do not interfere with potential emergency response procedures described in the Contingency and Emergency Procedures Plan (Attachment F to the POP).

In addition, the GE Project Manager will be supported by other GE's Representatives who will conduct the following site management activities:

- Document all visitors to the work area;

- Conduct inspections of work area security measures;
- Identify site security deficiencies and outstanding security issues;
- Implement and document corrective actions, to the extent possible, for deficiencies observed during the inspections or reported by other personnel;
- To the extent possible, inform on-site personnel involved in the response actions of any approved visitors prior to their arrival;
- Brief visitors or other personnel entering the work area(s) on potential hazards and site management procedures; and
- Verify that all personnel entering the work area have completed the appropriate training.

3 Site Management Activities

Although specific response action activities may vary between GE-owned areas and non-GE-owned areas, the primary goals of site management (e.g., protecting workers and the public from risks of harm) for both kinds of areas are similar, as are the activities that will be taken to achieve these goals. This section discusses site management activities and protocols that will be implemented for the various response actions. In addition, site management and security protocols for the UDF generally will follow the requirements discussed below; but detailed requirements for site management at the UDF will be presented in the revised UDF Final Design Plan and/or the revised Operation, Monitoring, and Maintenance (OMM) Plan for the UDF.[4]

3.1 Communications

Throughout the performance of the response actions, communications will be an important component of site management. Depending on the response action being undertaken and the area involved, GE or GE's Representatives will communicate with a variety of entities, including EPA and MassDEP and their contractors, GE's contractors, public officials, property owners/tenants, and/or the community. The topics of communication will vary based on the location and type of response action being undertaken, but could include the following:

- Short- and long-term scheduling issues;
- Site access and security procedures, access arrangements;
- Work progress updates;
- Coordination between multiple contractors and/or owners;
- Arrangement of site visits;
- Equipment storage arrangements;
- Identification of exclusion zones or contamination reduction zones;
- Identification of work areas that are restricted from public or recreational access;
- Scheduling and coordinating work activities on public or private property;
- Location and protection of utilities; and/or
- Arrangements for work within and adjacent to public roadways.

To aid in communications, GE or GE's Representatives will develop a contact list applicable to each RU or other response action and distribute this list to appropriate persons responsible for such communications. Additional communications specific to property owners/tenants and/or the community are discussed in GE's November 2024 revised Quality of Life Compliance Plan.

[4] The UDF Final Design Plan and UDF OMM Plan were initially submitted to EPA in February 2024 and were conditionally approved by EPA on September 12, 2024. In response to those conditional approvals, GE will revise the UDF Final Design Plan and UDF OMM Plan and will submit those revised plans to EPA by December 20, 2024.

3.2 Existing and Future Site Controls

Site control measures will be implemented at work areas to minimize the potential exposure of on-site personnel to contaminants and site hazards, protect the public from potential on-site hazards, and prevent vandalism of equipment and materials. Site control measures also enhance the ability to respond to emergency situations.

Portions of the GE Pittsfield facility are secured by perimeter fencing, and all gates to those portions of the facility are locked each evening. Signs are posted at all access gates to announce the access limitations, and phones are available to arrange access through a particular gate, if required. In addition, the GE plant is regularly patrolled for general security purposes.

The need for security measures during the performance of response actions at the ROR areas subject to such response actions and their support areas (access roads and staging areas) and at other, non-GE-owned areas subject to response actions will be assessed, and additional security will be added as necessary. The need for and type of such additional security will be addressed in the RD/RA Work Plans and/or SIPs for the RUs or other technical submittals for the response action in question. Security measures for the UDF will be included in the OMM Plan for the UDF.

Site controls during the response actions will address, as needed, the increased potential for interactions with unauthorized visitors, and provide for access and/or activities conducted by the property owner or tenant. Site and work area security will be planned and implemented on an activity- and property-specific basis, taking into account the following factors:

- Type and duration of response actions being conducted;
- Location and current use(s) of the property and any disruptions that the response actions may cause;
- Accommodations that will be required to allow for owner/tenant access onto the property;
- Existing security measures (e.g., fencing, security guards, signage), if any; and
- Temporary security measures to be instituted by GE.

During the response actions, the proposed security measures for the areas not owned by GE will be addressed in the RD/RA Work Plans and/or SIPs for the RUs or other technical submittals for the response actions involving such areas and will take into account the above factors.

3.3 Activity-Specific Security Measures

Security procedures may vary depending on the nature and/or particular phase of the response actions. For example, site management procedures for conducting soil or groundwater sampling at a property not owned by GE may require the sampling contractor to notify the property owner/tenant prior to sample collection, whereas remediation activities may require that portions of the property be temporarily fenced, with access to the work areas strictly controlled and monitored. A listing of specific procedures to be followed for each phase of work at each property that is not owned by GE or not controlled by GE is beyond the scope of this general Site Management Plan. As necessary, details will be presented in access agreements between GE and the property owner and/or in the technical submittals for the specific response action.

3.3.1 Sampling and Monitoring Activities

Sampling/monitoring activities (e.g., soil sampling, groundwater sampling and monitoring, sediment sampling, surface water sampling and monitoring) may be performed prior to or during construction activities. Groundwater monitoring will also be performed at GMAs 1, 3, and 4 as part of the regular long-term monitoring at those GMA or in connection with specific evaluations (e.g., for chlorobenzene at GMAs 1 and 3). These activities generally involve limited manpower and equipment. In general, surveillance by GE or GE's Representatives during the performance of these activities should be sufficient (in addition to the existing site controls) to prevent unauthorized access to sampling areas or interference with the sampling activities. Indeed, GE has performed sampling and monitoring activities of this nature on many occasions at properties both owned by GE and not owned by GE without incident.

However, for certain types of sampling activities or for sampling activities conducted in certain types of areas, notably, in the ROR, additional site control measures will be required. These types of activities include the following:

- Sampling conducted within or adjacent to public roads;
- Activities involving placement of unmanned sampling or monitoring equipment; and/or
- Sampling conducted in the vicinity of other ongoing, but unrelated, activities.

Some of the additional security measures necessary for these activities are discussed below. Task-specific requirements will be specified, as appropriate, in other technical submittals for each response action.

Traffic control measures will be implemented for any activities that take place within or adjacent to a public roadway. Work in public roadways will require a police detail in accordance with Massachusetts state law. Flagmen will be used to control traffic through work areas outside public roadways. In addition, signs will be used to warn oncoming traffic of any lane restrictions. GE or GE's Representatives will obtain any necessary traffic control approvals and make any required notifications prior to initiating traffic control measures.

If sampling or monitoring equipment is to be left unattended, it will be secured in place. Traffic cones, fencing, and/or guard posts will be placed to warn drivers and others of the presence of the equipment, if necessary. Wells or boreholes will be closed off to the extent possible, or access to such wells or boreholes will be restricted.

During the course of performing response actions, it is possible that multiple, unrelated activities may occur concurrently. In these situations, GE or GE's Representatives will implement measures to ensure that on-site personnel will not adversely interfere with other activities. Tasks where such interference is unavoidable will be coordinated to allow their completion with minimum interruptions/risks to others in the area.

3.3.2 Construction Activities

Several construction activities (e.g., soil excavation, ground reconfiguration and grading, sediment dredging, backfilling, sediment capping) may be performed as part of the response actions and could entail a number of typical construction-related hazards. Safety precautions involving the on-site work personnel will be implemented in accordance with applicable Occupational Safety and Health Administration requirements, the contents of the Site HASP, and any contractor-specific HASPs (which must meet the standards outlined in the Site HASP). Security precautions during off-work hours will be addressed by the following measures:

- For the GE facility and other GE-owned areas at the Site, including the UDF property, the current or planned security measures described for such areas in Section 3.2 (or, for the UDF, in the revised UDF OMM Plan) or comparable security measures will remain in place. In addition, where applicable, additional gates or barricades (e.g., chain or cable) will be placed across access roads to direct vehicular traffic. Signs will be posted at the

gates and the access gates or barricades will be locked during off-work hours and will be monitored during normal working hours.

- All construction-related excavations that cannot be backfilled at the close of a work day will be secured with temporary construction fencing.
- Security measures for the temporary staging areas and stockpiles that will be used as part of the ROR Remedial Action will be described on an RU-specific basis in the RD/RA Work Plans and/or SIPs for the RUs.
- If other temporary stockpiles are established for excavated materials and/or backfill materials that are not part of the ROR Remedial Action, the stockpiles will be placed in locations that, to the extent practicable, will not interfere with normal operations at the property involved, with response actions, or with normal traffic flow. Such stockpiles will be located and/or constructed in such a manner to minimize the potential for migration of contaminants in the stockpiled soils into site surface soils or drainage ditches. Temporary stockpiles located in unsecured areas will be covered with tarps or another appropriate cover (e.g., a spray on cover) to minimize the potential for rainfall to contact the stockpile.
- Areas affected by construction activities will be secured daily prior to workers leaving the Site.
- During construction activities, inspections of the active work area(s) will be performed on each day of construction. The inspections will be performed to note, and if necessary, respond to, any changes to the conditions of the work area(s).
- The need for additional security measures during specific response actions will be evaluated, and any proposed additional measures will be included in the RD/RA Work Plans and/or SIPs for the RUs, the revised UDF Final Design Plan or OMM Plan and/or UDF SIP, or other response action–specific technical submittals.
- At a minimum, the SIP developed for each RUs and for the UDF will include a section entitled “Site Management and Security,” which will discuss site management and security measures that are developed in concert with GE’s contractor.

In addition to the above measures, specific security measures will be required for (1) construction activities performed within or adjacent to public roads or other public access areas, (2) construction activities involving the use of unmanned construction equipment, and (3) construction activities in the vicinity of other ongoing, but unrelated, activities. The security measures for such activities will generally be the same as those specified for sampling activities of the same type, as described in Section 3.3.1. Such security measures will also be discussed, where relevant, in the Site Management and Security section of the SIPs developed for the RUs and for the UDF.

3.3.3 Daily Access/Site Visitors

Security measures associated with daily access and work area visitors will be controlled through the performance of a number of actions, depending on the reasons for access and the types of response actions underway at the time of access. Inadvertent, unauthorized access to active work areas will be minimized as a result of the measures described below. Any evidence of unauthorized entry and/or trespassing will be reported to the GE Project Manager.

GE Access – GE project personnel and GE’s Representatives will have access to observe the progress of the response actions at all work areas at all times. Upon arrival at a work area, GE project personnel and GE’s Representatives will inform the on-site workers of their presence and intended activities.

Contractor Access – During the active portions of response actions, it is expected that contractor personnel will enter and exit the work areas on a daily basis. All contractor personnel are required to have undergone the appropriate health and safety training as described in the Site HASP. For construction activities, a sign-in/sign-out

system will be administered by the contractor at a designated location to monitor contractor access and, if necessary, to check compliance with training requirements. For sampling activities or other short-term tasks, the names of contractor personnel accessing a work area will be recorded in field logbooks or otherwise documented.

Agency Access – The United States and the States of Massachusetts and Connecticut and their representatives, including agents, contractors, subcontractors, and employees, will have access to GE-owned and GE-controlled properties at the Site, as well as any other properties to the extent allowed by access agreements, during implementation of the response actions required by the CD or the Revised Permit. These agencies previously agreed that their representatives will use reasonable efforts to comply with all safety rules enforced by GE on a non-discriminatory basis against all GE employees and other personnel visiting the Site, including the use of protective clothing and equipment appropriate for site conditions. However, if GE requires the use of non-standard personal protective equipment for entry to a particular portion of a work area, and if the governmental representatives do not have such equipment and GE is unable to supply the required non-standard equipment upon request, then GE shall not deny access to such portion of the work area. Furthermore, nothing in this paragraph shall be construed to be a waiver of the United States' right, or the rights of Massachusetts and Connecticut, to access the Site in accordance with federal and state laws and regulations. GE will not execute an access agreement with a landowner that limits agency access without first engaging EPA to assist in obtaining such agency access.

Owner/Tenant Access – The owners or tenants of non-GE-owned properties where response actions will take place will generally have access to their properties during implementation of the response actions. However, access to specific work areas will be limited at certain times for safety reasons, based on provisions of access agreements between GE and the property owner/tenant, the status of ongoing activities, and/or health and safety considerations.

General Visitor Access – Other visitors to the Site may include public officials, citizens groups, and the media, among others. These visitors will be required to contact GE at least 24 hours prior to the desired access date. During this initial contact, discussions will involve the purpose of the visit, relevant safety training, arrival time, meeting place, and other arrangements. At the time of access, all visitors will be accompanied by a GE employee or designated representative for the duration of their visit. Once such visitors have obtained general access onto the premises, their access to specific areas will be dependent on the status of ongoing activities and specific health and safety requirements, including training requirements. General visitor access will be discussed in the Site Management and Security section of the SIPs developed for the RUs and for the UDF.

Emergency Medical Services – In the event of a medical emergency, the arriving unit will report to a designated entry location. The lead officer will be met by the contractor's health and safety coordinator and briefed and will immediately receive injured personnel for evaluation and/or transport. Emergency personnel will be provided with site-specific personal protective equipment beyond their own response gear. Response personnel will also have access to on-site emergency response equipment, as needed. If injured personnel cannot be decontaminated because of the possibility of causing further injury, the necessary personal protective equipment and supplies will be provided to protect emergency response personnel or equipment from contamination. Additional medical emergency information can be found in the site-specific HASP.

3.4 Transport of Waste Materials

The transport of removed soils, sediments, and debris from the ROR RUs to the on-site UDF and, where required, to off-site disposal facilities is addressed in GE's Revised On-Site and Off-Site Transportation and Disposal Plan (Arcadis 2024b), submitted on October 15, 2024. The specific procedures, travel modes, and travel routes for such on-site and off-site transportation will also be discussed for each RU in the Final RD/RA Work Plan for that RU based on the best available information at that time; and the SIP for each RU will include a specific section that provides further details on these topics, to be developed in accordance with the Revised On-Site and Off-Site

Transportation and Disposal Plan, as approved or conditionally approved by EPA, and in concert with GE's contractor. To avoid duplication, this transportation of ROR removed materials to the UDF and off-site disposal facilities is not addressed further in this revised Site Management Plan.

Other transport of waste material at the Site could include: (a) the transport of liquids, including recovered groundwater, leachate from the Building 71 On-Plant Consolidation Area, dewatered liquids from the UDF or temporary staging areas, and/or leachate from the UDF, to GE's Building 64G water treatment facility at the Pittsfield facility; and (b) transport of material such as recovered NAPL or filter cake from the Building 64G water treatment facility to GE's RCRA Part B-permitted hazardous waste storage facility at Building 78. Except as otherwise provided in a project-specific submittal, such transport will be considered to occur "on site" within the meaning of Paragraph 9.a of the CD and Section 121(e) of the Comprehensive Environmental Response, Compensation, and Liability Act. Further, if not otherwise provided in a project-specific submittal (including such a submittal for the UDF or an RU), the contractor for such on-site transport will be required to do the following:

- Employ qualified personnel trained in accordance with U.S. Department of Transportation requirements for handling and shipping hazardous materials, with such training to include general safety, emergency response, exposure protection, accident prevention, preparation of shipping papers, and securing loads;
- Employ drivers that have a Commercial Driver's License with an appropriate endorsement for the type of waste to be transported;
- Use trucks that are inspected by the U.S. Department of Transportation;
- Include in its HASP and Contingency Plan provisions for responding to transportation emergencies such as spills, releases, or other incidents;
- Maintain records of the number of loads of materials sent on a daily basis; and
- Confirm that the materials are suitable for transport.

Further, if not otherwise provided in a project-specific submittal, such on-site over-the-road transportation will be conducted in accordance with the following guidelines:

- After a safety check of the truck, the truck bed will be lined with polyethylene sheeting. Non-liquid material, if any, will be placed in the truck and the load will be covered. For liquid material, the vessel containing the liquid will be properly closed prior to transport.
- After loading, the vehicle will be inspected to ensure that portions of the solid or liquid materials to be transported are not present on the outside of appropriate cargo areas, and any such materials that have come to be deposited on the outside of the appropriate cargo areas will be removed prior to transport.
- An appropriate materials bill of lading will be prepared and signed by the vehicle driver. Given that the transport will occur entirely on site, a manifest will not be required.
- After another safety check of the vehicle and placarding, the vehicle will proceed to its destination using a designated route.
- Upon arrival at the destination, receipt of the load will be documented and the solid or liquid material will be off-loaded.

3.5 Equipment Cleaning

During the course of certain response actions, sampling, construction, or other reusable equipment may contact affected materials and require cleaning prior to removal from the Site. Cleaning of sampling equipment is addressed in Appendix EE of GE's latest revised Field Sampling Plan/Quality Assurance Project Plan (Arcadis 2023). For other equipment, the potential for such contact will be minimized through the implementation of operational controls. For example, certain response actions may involve the use of dedicated construction equipment that remains at the designated work area for extended periods to minimize the use of (and subsequent cleaning of) several pieces of construction equipment. Additional measures to minimize contact with impacted media (as well as the need for subsequent cleaning) will include, to the extent practicable, sizing construction equipment appropriately for the specified task and/or designating "clean" access roads, as appropriate, to minimize opportunities for personnel, equipment, and clean materials to contact impacted materials. For each response action, GE or GE's Representatives will evaluate and implement measures to minimize the frequency/occurrence of equipment contact with affected site materials.

For equipment that has contacted affected materials during the response action, cleaning activities will be performed prior to removal of the equipment from the Site or transfer to a different RU or area of the Site. For such equipment that needs to be moved or transported to a different remediation area over clean access roads or public roadways, appropriate practices will be implemented to ensure that the equipment is clean, such as visual verification of removal of impacted soil/sediment from construction equipment, before such movement or transport. The goal of this cleaning activity is to minimize the potential for transport of affected site materials from the response action to unimpacted areas. The method and extent of equipment cleaning will be dictated by GE or GE's Representatives in consideration of a number of factors, including the specific activities performed by the equipment, the type of media contacted and its chemical constituent concentration, the potential future use of the equipment, and the ownership of the equipment.

In general, cleaning activities may involve any number of measures, including one or more of the following: visual inspection of the areas of the equipment that have contacted the affected site materials; manual cleaning of such portions of the equipment within the response action area and associated support areas using brooms, brushes, and/or a water spray; and/or the transport of the affected equipment to the GE facility for high-pressure water and/or detergent cleaning. In instances where specific equipment not owned by GE may be used at other locations external to the Site, samples of the cleaned equipment will be collected and subject to laboratory analyses (e.g., wipe sampling of a backhoe bucket for PCB analysis). Equipment that has contacted affected materials during a response action will not be removed from the Site until authorization is provided by GE or GE's Representatives. Further requirements for controls, cleaning procedures, and sampling will be included, as needed, in the RD/RA Work Plans and/or SIPs for the RUs, the revised UDF OMM Plan or UDF SIP, or other technical submittals for the individual response actions.

4 References

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Attachment D

Ambient Air Monitoring Plan

General Electric Company

Ambient Air Monitoring Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

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Abbreviations

AAMP	Ambient Air Monitoring Plan
Arcadis	Arcadis U.S., Inc.
ASOS	Automated Surface Observation System
BMP	best management practice
CD	Consent Decree
DAS	data acquisition system
EPA	United States Environmental Protection Agency
FSP/QAPP	Field Sampling Plan/Quality Assurance Project Plan
GE	General Electric Company
GPS	global positioning system
µg/m^3	microgram per cubic meter
OMM Plan	Operation, Monitoring, and Maintenance Plan
OPCA	On-Plant Consolidation Area
PCB	polychlorinated biphenyl
PM	particulate matter
PM_{10}	particulates having a nominal particle diameter less than 10 micrometers
PUF	polyurethane foam
QA/QC	quality assurance/quality control
RD/RA	Remedial Design/Remedial Action
Revised QOL Plan	Revised Quality of Life Compliance Plan
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
ROR	Rest of River
RU	Remediation Unit
Site	GE-Pittsfield/Housatonic River Site
UDF	Upland Disposal Facility

1 Introduction

This revised Ambient Air Monitoring Plan (AAMP), which is Attachment D to the revised Project Operations Plan (POP), describes the ambient air monitoring activities that will be conducted by the General Electric Company (GE) during certain response actions at the GE-Pittsfield/Housatonic River Site (Site) under the Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection, and other government agencies in October 1999 and entered by the United States District Court in Massachusetts on October 27, 2000 (EPA and GE 2000). On January 25, 2024, GE submitted a revision of the AAMP that had been attached to GE's July 2013 Project Operations Plan (Arcadis 2013), which had previously been prepared and approved by EPA under the CD and which applied to the Removal Actions that GE was then obligated to perform under the CD (most of which have been completed). That revised AAMP, which was included in GE's January 2024 POP (Arcadis 2024a), also constituted an ambient air monitoring program for the activities that are being, and will be, conducted by GE as part of the Remedial Action for the Rest of River (ROR) portion of the Site pursuant to a Revised Resource Conservation and Recovery Act Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020). The ROR is that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. In accordance with the Revised Permit, the ROR Remedial Action includes not only remediation activities, but also the construction and operation of an on-site Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area. EPA provided conditional approval of and comments on the January 2024 POP, including the AAMP, on July 22, 2024, directing GE to submit a further revised plan. This document constitutes that further AAMP.

This revised AAMP describes air monitoring procedures to be implemented during performance of (1) future activities at the Site associated with the remaining Removal Actions and other non-ROR activities under the CD and the associated Statement of Work for Removal Actions Outside the River (Appendix E to the CD); (2) the ROR Remedial Action under the Revised Permit, including remediation activities at the ROR and the construction, operation, and closure of the UDF; and (3) other activities conducted by GE at the Site, including demolition and debris disposition activities for buildings on GE property.

Response actions to be conducted by GE, including the ROR Remedial Action, may involve construction activities and other material-handling activities that could result in the generation of airborne particulate matter (PM) and potentially airborne polychlorinated biphenyls (PCBs). To assess the generation and potential wind-induced migration of PM and, where relevant, PCBs, GE will conduct ambient air monitoring during implementation of the field components of the response actions. GE will use a combination of real-time air monitoring and collection of air samples to evaluate and help control fugitive emissions of PM and PCBs.

This AAMP is a generic plan that provides general requirements for sampling locations, frequencies, parameters, and methodologies. This AAMP also incorporates the information presented in Appendix G and Attachment F to GE's most recent revised Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP; Arcadis 2023), submitted on December 21, 2023 and conditionally approved by EPA on March 21, 2024, which describes the standard procedures and methodologies to be used for ambient air sampling and analysis. In addition, for the ROR Remedial Action, this AAMP refers to the air monitoring information presented in GE's Revised Quality of Life Compliance Plan (Revised QOL Plan; Anchor QEA and Arcadis 2024), submitted on November 22, 2024, including identification of the PM and PCB air quality standards to be used for the ROR Remedial Action (including UDF construction, operations, and closure).

This revised plan, as approved by EPA, will be referenced as appropriate in future submittals relating to these response actions. However, certain activities described in this AAMP may not be applicable to each response action and the corresponding type, scope, and magnitude of the response action activities. In addition, specific air monitoring locations and frequencies for each response action will be described in the project-specific work plans, including, for the ROR Remedial Action, the revised Operation, Monitoring, and Maintenance (OMM) Plan for the UDF[1] and the Final Remedial Design/Remedial Action (RD/RA) Work Plan and/or Supplemental Information Package (SIP) for each ROR Remediation Unit (RU).[2] This plan is subject to modification based on the specific response actions and any site- or activity-specific considerations. Any modifications will be presented in the technical RD/RA work plans or other submittals for that response action and will be subject to EPA review and approval.

Post-construction air monitoring for both the ROR Remedial Action RUs and the UDF is not described herein. Instead, such monitoring will be described in the Post-Construction Inspection, Monitoring and Maintenance Plans for the RUs and the Post-Closure Monitoring and Maintenance Plan for the UDF, as provided in Sections 5.1 and 5.2 of the Final Revised ROR Statement of Work (Final Revised ROR SOW; Anchor QEA et al. 2021).

The content in the remainder of this document is organized as follows:

- Section 2 provides a general overview of the proposed ambient air monitoring program, including the general types of response actions for which ambient air monitoring will and will not be performed. Also presented in this section is general information related to the selection of monitoring locations, monitoring frequency, and constituents subject to monitoring.
- Section 3 presents details regarding the meteorological monitoring that will be performed to support understanding and evaluation of the results of the monitoring for airborne particulates and PCBs.
- Sections 4 and 5 present further details regarding the monitoring that will be performed for airborne particulates and PCBs, respectively, including information related to field and/or analytical activities for both types of monitoring, with references to Appendix G to the most recent (December 2023) revised FSP/QAPP.
- Section 6 presents requirements for visual observations of dusty and dust-producing conditions in the work area.
- Section 7 references the quality assurance/quality control (QA/QC) procedures that will be implemented for field and analytical activities.
- Section 8 describes the Notification Levels and Action Levels for PM and PCBs and discusses how the results of ambient air monitoring will be evaluated with respect to those levels.
- Section 9 describes the potential mitigation activities that may be implemented during response actions to address exceedances of the Notification and Action Levels.
- Section 10 describes the various documentation and reporting requirements associated with the monitoring program.
- Section 11 provides references for documents cited in the text.

[1] GE submitted an OMM Plan for the UDF in February 2024 (Arcadis 2024b), and it was conditionally approved by EPA on September 12, 2024. Based on EPA's conditional approval, GE will submit a revised UDF OMM Plan by December 20, 2024. The same is true of the UDF Final Design Plan.

[2] The RUs that are part of the ROR Remedial Action were identified in GE's Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures (Anchor QEA 2022), approved by EPA on July 6, 2022. They correspond generally to the reaches of the ROR as designated by EPA.

2 Overview of Monitoring Activities

As discussed in Section 1, this AAMP describes the ambient air monitoring that GE will conduct during response action activities at the Site that could potentially produce airborne PM and PCBs, so as to assess potential impacts to ambient air and the need for dust control and, if appropriate, other control measures. The ambient air monitoring is designed to evaluate compliance with defined air quality standards for PM and PCBs. As discussed in Section 8, consistent with the standards previously used for remediation projects at this Site, the applicable ambient air standards will consist of Notification and Action Levels for both PM, measured as airborne particulates having a nominal particle diameter less than 10 micrometers (PM_{10}), and airborne PCBs. The ambient air monitoring described in this AAMP is in addition to site or personal monitoring performed by on-site remediation contractors as part of their separate health and safety plan.

The remainder of this section provides general information concerning the scope of ambient air monitoring that may be conducted during certain response actions within the active work areas, including the activities for which ambient air monitoring will be conducted, general criteria for the location of monitoring stations, and parameters that will be monitored through this program. In addition, in accordance with Section 4.3.1.2 of GE's Final Revised ROR SOW, this AAMP includes provisions for baseline PCB ambient air monitoring at the UDF and UDF support areas prior to their active use and in each ROR RU prior to any remediation activities in that RU. However, the specific locations for such baseline monitoring will be included in the revised OMM Plan for the UDF and the Final RD/RA Work Plan or SIP for each RU.

2.1 Response Actions Subject to Monitoring

Response actions subject to ambient air monitoring include the following types of activities:

- Excavation/removal, handling, and transporting of affected soils and sediment, including sediment dewatering/ stabilization, at the various active work areas;[3]
- Placement of engineered caps, backfill, and/or other soil/sediment cover materials;
- Construction activities and operations at the UDF and closure of the UDF;[4]
- Site preparation activities that are conducted near residential areas and that have the potential to generate nuisance (non-impacted) dust, such as the construction of access roads or staging areas (monitoring for PM_{10} only);
- Building demolition activities at GE-owned property within the Site;
- Other activities that would likely result in the generation of airborne particulates within the active work areas; and
- Other active remediation construction activities that could result in the generation of airborne PCBs at concentrations greater than upwind levels (i.e., levels existing in air not impacted by site activities).

[3] This will include particulate monitoring during sediment removal activities, subject to the qualification described at the beginning of Section 4.

[4] During construction of the UDF or other ground-disturbance activities that do not involve handling of PCB-containing soils or sediments, the ambient air monitoring will be conducted only for PM_{10}. However, monitoring for both PM_{10} and PCBs will be conducted during operation and closure of the UDF.

Unless otherwise specified in the technical RD/RA submittals for a specific response action, air monitoring will be performed when the activities identified above are actively being performed. For several types of response actions (i.e., soil investigations, mobilization, site preparation activities that are not near residential areas or do not generate dust, final restoration and landscaping, and demobilization), there is a low potential for the generation of airborne particulates or PCBs. Therefore, an ambient air monitoring program will not be conducted for these types of activities unless otherwise agreed between GE and EPA and provided in the project-specific work plan.

In addition, this AAMP applies to the post-closure PCB air monitoring at GE's On-Plant Consolidation Areas (OPCAs) in accordance with the requirements specified in GE's Revised OPCA Post-Removal Site Control Plan included in Appendix H to the Final Completion Report - On-Plant Consolidation Areas (Arcadis 2011), approved by EPA on September 26, 2011.[5]

2.2 Monitoring Locations

Ambient air monitoring will be conducted at representative locations near the closest receptor to the work activities or between the active work areas and the closest receptor.[6] It is anticipated that, during active work activities, ambient air monitoring will be performed at a minimum of three locations around the work area. In general, the three or more locations will be selected to form a triangular or other surrounding pattern around the area(s) subject to work activities.[7] This pattern will facilitate upwind/downwind monitoring and be adaptable to potential changes in wind direction. A general guideline is that work areas larger than two acres, as well as work areas with special concerns such as the location of nearby receptors, may entail the use of more than three monitors.

Individual monitoring station locations will use the EPA guidance documents entitled Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD) (EPA 1987) and EPA Engineering Bulletin Design Consideration for Ambient Air Monitoring at Superfund Sites (EPA 1992) to the extent practicable concerning the placement of monitors. The location of potential receptors, wind direction, wind speed, site accessibility, site security, and any existing ambient air monitoring data will be considered when locating monitoring stations. In general, stations should have line-of-sight connection with response operation activities. If possible, monitoring stations should be at least nine meters from the edge of a tree or nearby building. Where possible, at least two of the station locations will be generally downwind and near the active work zone boundary to provide early warning detection. The sampling equipment will be installed to collect ambient air samples at a height of between two and nine meters above the ground surface to monitor ambient air that is representative of the breathing zone of potential off-site receptors. In most cases, when measuring ground-level sources, the height of the sampling inlet will be approximately two meters above ground level. Figure D-1 shows a typical air monitoring station setup scenario.

[5] That plan requires PCB air monitoring semi-annually in July and September (unless an alternate frequency is approved by EPA) at locations around the perimeter of the OPCAs. It also requires ambient air monitoring for PCBs and particulates at any time that waste materials consolidated within the OPCAs are exposed.

[6] As discussed in Section 8, regardless of whether the monitoring location is near the closest receptor or between the active work areas and the closest receptors, exceedances of a Notification or Action Level will trigger the actions specified for such exceedances in this revised AAMP or other applicable plans,

[7] In addition, for PCB ambient air monitoring, a separate co-located PCB sampling station will be used for a minimum of 5% of the sampling events for a given response action or project and time period (to be specified in the project-specific work plan) for the purposes of QA/QC (i.e., obtaining field duplicate samples).

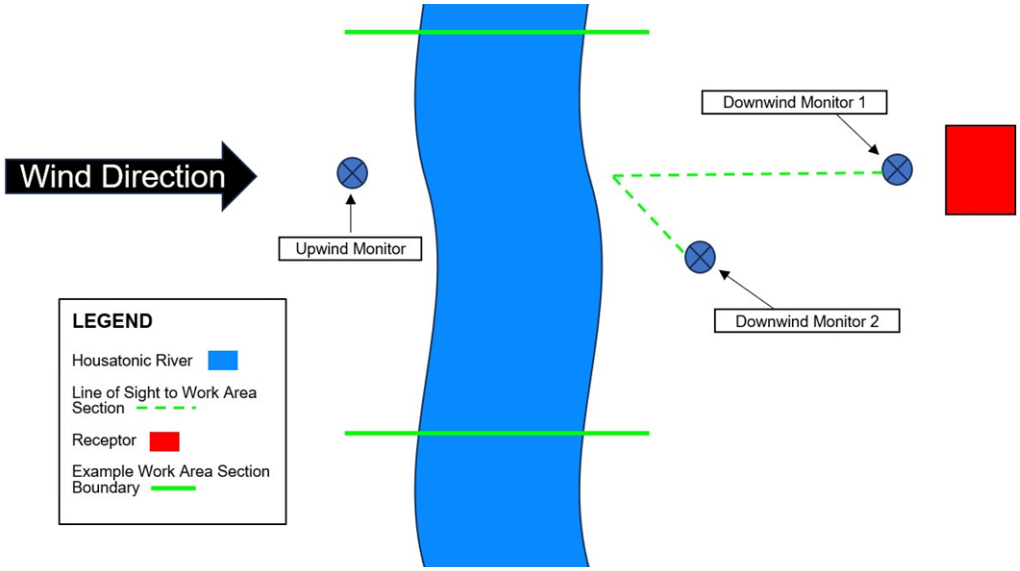

Figure D-1 Typical Air Monitoring Station Setup

For the ROR remediation activities, as noted above, specific locations for the ambient air monitoring stations, the number of stations, and the planned duration of monitoring at a specific location will be identified in the Final RD/RA Work Plan or SIP for each RU. Where active in-river, riverbank, and/or floodplain work occurs that may produce airborne particulates or PCBs, each work area will be segmented into planned work sections to establish temporary air monitoring stations. The air monitoring stations will be positioned with the alignment focused on capturing the approximate middle of the work section and closest receptor at that location and will be located to capture upwind and downwind conditions, where possible. The monitoring stations will be in place for the duration of the adjacent remediation work and will be moved periodically as the active work progresses to maintain coverage of the active work area.

For the UDF area, specific locations for the ambient air monitoring stations, the number of stations, and the planned duration of monitoring at a specific location will be identified in the forthcoming revised UDF OMM Plan. Similar to the layout for the RUs, it is anticipated that the general configuration will include three or more locations to form a triangular or other surrounding pattern around the operational area within the UDF area (including the active consolidation area, the leachate tank area, the treatment area, and haul roads) to facilitate upwind/downwind monitoring and be adaptable to potential changes in wind direction.

2.3 Monitoring Parameters

During the performance of response actions such as those identified in Section 2.1, the constituents subject to ambient air monitoring will be PM_{10} and PCBs.

PM_{10} will be used to trigger alarm-level conditions from construction and material-handling activities. Monitoring for PM_{10} provides a correlation to ambient dust levels (potentially related to remediation activities) on a real-time basis and, as such, facilitates decision-making relative to potential off-site impacts, the need for on-site investigation, and, where warranted, further dust control measures. Monitoring for airborne particulates also provides a qualitative assessment regarding the potential presence of airborne PCBs. PCBs are relatively non-volatile. The most likely route of migration for these constituents during the performance of a response action is via wind-blown airborne

particulates. Thus, real-time PM_{10} monitoring downwind of construction and material-handling activities provides a sentinel measurement for potential release of airborne PCBs.

Nevertheless, airborne PCBs will also be subject to ambient air monitoring for certain response actions in the vicinity of potential sources of PCB emissions, depending on the nature and duration of response action activities. The technical RD/RA work plans or other submittals for a specific response action will discuss the need for and type of PCB ambient air monitoring during that response action and will provide details regarding such monitoring.

As noted in Section 2.1 above, during construction of the UDF or other ground-disturbance activities (including site preparation) that do not involve handling of PCB-containing soils or sediments, the ambient air monitoring will be conducted only for PM_{10}. However, monitoring for both PM_{10} and PCBs will be conducted during operation and closure of the UDF, including during active handling of PCB-containing materials or wastes. As noted in Section 1, post-construction air monitoring for both the UDF and the RUs is not described in this AAMP.

Sections 4 and 5 of this AAMP provide additional information on performing ambient air monitoring for PM_{10} and PCBs, respectively.

2.4 ROR Remedial Action Baseline Assessment

For the ROR Remedial Action, in accordance with Section 4.3.1.2 of GE's Final Revised ROR SOW, baseline ambient air monitoring for PCBs will be conducted to assess conditions prior to active use of the UDF or UDF support area and prior to implementation of remediation activities in each ROR RU. Specifically, a minimum of two baseline monitoring events for PCBs will be conducted within a few weeks of each other prior to active use of the UDF or UDF support area and prior to the start of remediation in each RU. When feasible, baseline sampling will occur in warmer months. Baseline monitoring locations for the UDF and UDF support area will be identified in the revised UDF OMM Plan and those for each RU will be identified in the Final RD/RA Work Plan or SIP for that RU, considering the siting criteria for monitoring stations in Section 2.2. Baseline monitoring locations to be identified in those documents will focus on areas with the highest density and sensitivity of receptors, such as residential neighborhoods or heavily used recreational areas, provided that such areas are located within or are representative of the area(s) where remediation will be conducted. Sampling events at baseline monitoring locations will be 24 hours in duration. Sample collection and analysis methodologies described in Section 5 and in the most recent revised FSP/QAPP will be used to perform the baseline monitoring.

Baseline monitoring data will be used, where appropriate, during the ROR Remedial Action (see Section 5) to provide context for data response and investigation in the event of PCB Notification or Action Level exceedances. Baseline data will serve as a line of evidence to evaluate whether airborne PCBs detected through the ROR Remedial Action monitoring program are due to response activities or from other activities in the area. As discussed in Section 5, either high-volume or low-volume samplers may be used during active use of the UDF or UDF support area or during remediation in each RU. To support future use of either type of sampling, both high-volume and low-volume samplers will be used at monitoring locations during baseline ambient air monitoring, unless otherwise specified in the revised UDF OMM Plan or the Final RD/RA Work Plan or SIP for the applicable RU.

3 Meteorological Monitoring

As provided in Appendix G to the most recent revised FSP/QAPP, in conjunction with the ambient air monitoring for particulates and/or PCBs, one or more meteorological stations will be installed and operated to record wind speed and wind direction, as well as other meteorological data, over 24-hour periods to support understanding and evaluation of the air monitoring results for particulates and/or PCBs. The location(s) of the meteorological station(s) will depend on the location(s) of construction activities so as to provide representative meteorological data for those activities. The meteorological stations will include an Automated Surface Observation System (ASOS) at the GE facility in Pittsfield, a meteorological station located at the UDF property, and/or an ASOS or anemometer farther downstream (e.g., near Rising Pond), depending on the location of the work activities, as specified in the project-specific work plan (i.e., the RD/RA work plan or SIP for a given RU, the revised UDF OMM Plan for the UDF area, or other technical RD/RA submittal(s) for other specific response actions).

Further, for reference, whenever air sampling data are reported, the meteorological data from the ASOS monitor operated at the Pittsfield Municipal Airport will be included with the sampling results unless otherwise provided in the project-specific work plan. This ASOS monitor is operated by the National Weather Service, Federal Aviation Administration, and U.S. Department of Defense; it measures and records wind speed, wind direction, precipitation, temperature, sky conditions, barometric pressure, and relative humidity.

4 Particulate Monitoring

Ambient air monitoring of particulates as PM_{10} will be conducted daily during response action activities (including sediment removal and UDF activities) for a minimum of 10 hours when construction is ongoing and throughout the duration of daily construction activities. If construction activities are ongoing for longer than 10 hours, particulate monitoring will continue until daily activities are complete. The air monitoring will be conducted using real-time air meters with dataloggers to obtain continuous readings for determining the work-day average in comparison with the PM_{10} standards. Where particulate monitoring is performed for sediment removal activities conducted under wet conditions (e.g., wet excavation, hydraulic dredging), if results of such monitoring during the initial two weeks of that activity indicate that PM_{10} levels are below the Notification Level for PM_{10} (described in Section 8), GE will propose to EPA that the PM_{10} monitoring frequency be reduced or terminated during the remainder of that activity.

Equipment for real-time monitoring for particulates will be one that meets the industry standard of approval as specified in California Rule 1466[8] or an equivalent monitor approved by EPA for air sampling of PM_{10}. Available options at the time of this AAMP include Aeroqual Dust Sentry, TSI Dusttrak, Thermo ADR1500, MetOne E-Sampler, and SailBri Cooper, Inc. 2021 (i.e., "PDM").[9] Air monitoring stations will be equipped with data telemetry that uploads to a secure data acquisition system (DAS). For the ROR Remedial Action, the equipment will be equipped with an alarm that will indicate whether concentrations exceed the PM_{10} Notification Level (identified in Section 8). The system will be capable of storing data, providing internet access to data, and sending alarms via text message and email based on equipment measurements. Air monitoring stations with real-time particulate monitoring, data logging, and notification alarms can operate remotely with battery power.[10] Figure D-2 shows an example of a real-time particulate monitoring station.

Figure D-2 Deployable particulate air monitoring station, photos courtesy of Aeroqual, Inc.

At each station, real-time particulate monitoring will be performed following the procedures presented in Appendix G to the most recent revised FSP/QAPP.[11] Particulate data will be transmitted to the DAS. During its operation, the instrument will report, on a real-time basis, the instantaneous particulate reading, the highest discrete reading that

[8] California South Coast Air Quality Management District, Rule 1466, Executive Officer Pre-Approved PM10 Monitors (available online at https://www.aqmd.gov/home/rules-compliance/compliance/rule-1466/pre-approved-monitors).

[9] Note that although the equipment listed has the capability to allow for the determination of site contribution based on downwind versus upwind particulate levels, consistent with Rule 1466, site contribution will not be automatically calculated unless otherwise specified in the technical RD/RA submittals for a specific response action or project.

[10] In remote areas with a weak or no cell signal, data may be downloaded directly from the instrument to a USB flash drive.

[11] For remote locations, real-time monitoring equipment can be programmed to run and report for a specified period (e.g., 10-hour period).

has been recorded during the monitoring period, and the cumulative average for the current monitoring period (e.g., daily average concentration). In addition, the DAS will make this information available to project personnel via a secure website and by sending text messages and emails with notification alarms, such as high dust level or low battery.

All equipment options approved under California Rule 1466 (cited above) (or equivalent) have measures to control potential effects of high humidity, such as heated inlets. However, because of the sensitivity of particulate monitors to fog, other aerosols, or high humidity, the monitors will be carefully observed during humid or rainy weather. GE or its air monitoring contractor will use professional engineering judgment to determine the reliability of data collected during foggy and/or high dew-point conditions. Data summaries will flag data for periods when moisture is determined to be a clear factor in data reliability. The raw data file will be marked and maintained. Data flags will be noted appropriately on the pertinent data summary table.

5 PCB Monitoring

For the ROR Remedial Action, PCB air monitoring will typically be conducted for 24-hour periods when required. At the start of each new type of construction activity in each construction season in the vicinity of potential sources of PCB emissions, PCB monitoring will initially be performed for two sequential 24-hour periods (i.e., two back-to-back daily events). The purpose of this monitoring is to confirm that representative airborne concentrations for PCBs do not exceed the designated air quality standards for PCBs, specified in Section 8. Actions that will be taken based on the PCB monitoring performed at the start of each new type of construction activity in each construction season are as follows:

- If monitoring indicates that air levels are acceptable (i.e., are below the Notification Level specified in Section 8), the monitoring frequency will be reduced to one 24-hour monitoring event weekly for each area of active construction or work activity for the duration of that activity.
- If monitoring indicates that air levels are not acceptable (i.e., are above the Notification or Action Level specified in Section 8), the actions specified in Section 8.1 (for a Notification Level exceedance) and/or Section 8.2 (for an Action Level exceedance) will be implemented.

If the total duration of active construction or work activity is less than one week, then one sampling event will be completed. Monitoring for two sequential 24-hour periods will be reinstituted when a new type of construction activity occurs in an area. Air monitoring and dust suppression measures for PCBs will be maintained until excavation and transport of PCB-contaminated soil and sediment, backfilling of open excavations, and capping and disposal of PCB-contaminated soil and sediment, are complete.

For other, non-ROR response actions, PCB air monitoring will also typically be conducted for 24-hour periods when required, and the frequency of such PCB monitoring will be specified in the project-specific work plan. For the OPCA post-closure monitoring, as noted above, the current specified frequency is twice per year (in July and September).

The PCB monitoring will be performed using continuous 24-hour air samplers, as described in Appendix G to the most recent revised FSP/QAPP, to obtain valid and representative data on PCB ambient air levels near the area(s) where the relevant response actions are being conducted and to determine compliance with the PCB air quality standards. For the ROR Remedial Action, the type of PCB air samplers to be used – i.e., high-volume samplers or low-volume samplers – will be specified in the Final RD/RA Work Plan or SIP for each RU or, for the UDF area, in the revised UDF OMM Plan. In general, for those ROR Remedial Action activities, high-volume sampling will be performed at stationary locations with electrical power, and low-volume samplers (which are battery-powered) will be used for the mobile locations in the vicinity of active remediation activities or at fixed locations where no power source is available.[12] For other, non-ROR response actions where ambient air monitoring is conducted under the AAMP, as well as for post-closure PCB air monitoring at the OPCAs, high-volume samplers will be used unless otherwise provided in the project-specific work plan.

Air samples collected for PCBs with high-volume samplers will utilize high-volume EPA Compendium Method TO-4A, Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using High Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD). High-volume samples will be collected at a flow rate of approximately 225 liters per minute, with a sampling period of approximately 24 hours. Samples collected with high-volume samplers will use quartz fiber pre-filters to capture and analyze particulate phases of the samples. The high-volume sampler will collect particles on the filter. Vapor-phase analytes

[12] All stations within a triangular or other surrounding pattern around the area(s) subject to work activities will be the same type of sampler (i.e., all high-volume or all low-volume samplers) to allow for better comparison of upwind and downwind data.

will be collected on PUF media inside glass sampling cartridges. The filter and PUF cartridge will be placed in clean, sealed containers and returned to the laboratory for analysis. High-volume samples will be analyzed for total PCBs by EPA Method TO-4A using capillary gas chromatography with electron capture detection, as described in Appendix G to the most recent revised FSP/QAPP and the analytical Standard Operating Procedure (SOP) in Attachment F to that FSP/QAPP. Method detection and reporting limits for Method TO-4A are presented in Table 6C of that FSP/QAPP. Figure D-3 shows an example of a high-volume PUF sampler.

Figure D-3 High-volume PUF air sampler, courtesy of Tisch, Inc.

Air samples collected for PCBs with low-volume samplers will utilize EPA Compendium Method TO-10A, Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using Low Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD). This method, when used for PCB sampling, employs a low-volume sampler and a sampling cartridge consisting of a PUF absorbent or PUF with Tenax charcoal layer to sample ambient air at a typical rate of one to five liters per minute for 24 hours. Because of high detection limits for a few of the PCB Aroclors, the analytical laboratory will be consulted when developing the RU-specific RD/RA Work Plans or SIPs to discuss any needed adjustments to sample collection duration or flow rates. After sample collection, the PUF cartridges will be placed in clean, sealed containers and returned to the laboratory for analysis. The low-volume samples will be analyzed for total PCBs by EPA Method TO-10A using capillary gas chromatography with mass spectrophotometry, as described in Appendix G to the most recent revised FSP/QAPP and the analytical SOP in Attachment F to that FSP/QAPP. Method detection limits and reporting for Method TO-10A are presented in Table 6C of that FSP/QAPP. Figure D-4 shows an example of a low-volume PCB monitoring setup.

Figure D-4 Battery-powered air sampling equipment for PCBs, courtesy of SKC Inc.

6 Visual Dust Observations

In addition to real-time monitoring, qualitative visual observations of dust in the work area will be employed at least once daily or as conditions warrant, such as when dust-producing activities occur. Real-time instrument readings and/or sample results will also be used if needed to assess conditions and the effectiveness of routine controls and best management practices (BMPs).

As directed by EPA, GE has established a qualitative QOL standard for visible dust during the ROR Remedial Action. That standard is described in Section 4.3.1.3 of the Revised QOL Plan, submitted on November 22, 2024. Under that standard, if visible dust caused by remediation activities is observed leaving the immediate work area, GE will investigate the cause of the visible dust, and the appropriate monitors will be checked as soon as possible after the dust has been observed. If warranted based on investigation of the cause of the visible dust and the particulate monitoring data, GE will implement appropriate measures to mitigate the visible dust leaving the work area. The actions to be considered in such circumstances include the types of measures described in Section 9.

7 Quality Assurance and Quality Control Procedures

QA/QC procedures for the air sampling program will follow those described in Appendix G to the most recent revised FSP/QAPP. PCB data will be validated in accordance with Validation Annex 6 of that FSP/QAPP. Specific QA/QC procedures for particulate sampling will be based on the sampling equipment manufacturer's recommendations.

8 Notification and Action Levels

The ambient air quality standards for PM_{10} and PCBs consist of Notification Levels and Action Levels, which will be used to evaluate (1) the levels of airborne particulates and/or PCBs originating from the active work areas during response actions and (2) the need for additional measures related to monitoring, dust control, and/or other potential controls. These standards are the same as the air quality standards presented in the Revised QOL Plan for the ROR Remedial Action, submitted on November 22, 2024.

For PM_{10}, the Notification Level will be a minimum 10-hour average PM_{10} concentration (at any on-site monitor) greater than 120 micrograms per cubic meter ($\mu g/m^3$). This level represents 80% of the current 24-hour National Ambient Air Quality Standard (NAAQS) for PM_{10}, which is 150 $\mu g/m^3$. The Action Level for PM_{10} will be a minimum 10-hour average PM_{10} concentration of 150 $\mu g/m^3$ (equivalent to the level of the 24-hour NAAQS).[13] If the duration of construction activities on a particular day is longer than 10 hours, the data collected over the full monitoring period will be averaged and compared to the PM_{10} Notification and Action Levels.

For PCBs in air, the Notification Level will be a 24-hour average PCB concentration of 0.05 $\mu g/m^3$, and the Action Level will be a 24-hour average concentration of 0.1 $\mu g/m^3$ (except for the post-closure monitoring at the OPCAs, where, based on agreement between GE and EPA, the Action Level has been and will continue to be 0.05 $\mu g/m^3$, equivalent to the Notification Level). EPA has established these Notification and Action Levels, and the rationale for these health-based levels is described in a July 2024 EPA Fact Sheet entitled *Rest of River Cleanup and the Upland Disposal Facility Will Not Pose a Health Threat from Airborne PCBs*, which is provided as an attachment to the Revised QOL Plan.

These Notification and Action Levels for PM_{10} and airborne PCBs are consistent with the levels established or approved by EPA and used by GE for prior Removal Actions at the Site and also used by EPA for the 1½-Mile Reach Removal Action. These levels are summarized in Table D-1 and discussed further in Sections 8.1 and 8.2 below. Any modification to these levels for a given project will be proposed in the project-specific work plan.

Table D-1: Notification and Action Levels for PM_{10} and Airborne PCBs

Parameter	Unit	Notification Level (evaluation period)	Action Level (evaluation period)
PM_{10}	$\mu g/m^3$	120 (work-day average; minimum 10-hour average)	150 (work-day average; minimum 10-hour average)
PCBs	$\mu g/m^3$	0.05 (24-hour average)	0.1 (24-hour average)

Routine control measures and BMPs will be specified in the project-specific work plans to control dust and PCB emissions to the extent practicable during implementation of the response actions, including waste handling and disposal activities at the UDF. For the ROR Remedial Action, specific control measures and BMPs for each RU will be identified in the Final RD/RA Work Plan and/or the SIP for that RU, and those for the UDF area will be identified in the revised UDF Final Design Plan, the revised UDF OMM Plan, and/or UDF SIP. The objective of these measures and practices is to minimize adverse impacts of air emissions from remediation and related construction activities on ambient air quality in the ROR project area.

[13] Note that, in contrast to this Action Level, the federal 24-hour PM_{10} NAAQS is not to be exceeded once over three years on average.

Note that exceedances of a Notification or Action Level, regardless of whether the monitoring location is near the closest receptor or between the active work areas and the closest receptors, will trigger the actions specified for such exceedance in the following sections, as well as in the Revised QOL Plan and other pertinent RU-specific documents (e.g., Final RD/RA Work Plan and/or SIP for each ROR RU)

8.1 Actions in the Event of a Notification Level Exceedance

The Notification Levels will be used to assess site conditions and implement corrective actions to avoid exceedances of the Action Levels. Unless otherwise stated in the project-specific work plan, the following procedures will be followed in the event of a Notification Level exceedance.

For particulates, monitoring data on PM_{10} will be compared to the Notification Level to determine whether site-related activities are causing an unacceptable increase in airborne particulate concentrations. On a daily basis during the response actions, including waste disposal/handling activities, the particulate data from the downwind monitors will be compared with the Notification Level.[14] If the work-day average (minimum 10-hour average) PM_{10} concentration at any on-site monitor exceeds the Notification Level (regardless of any comparison of results at upwind and downwind monitors), the exceedance will be reported to EPA as soon as practicable, but no later than 24 hours following receipt of data showing the exceedance. In addition, in that event, GE will evaluate the cause of the exceedance and, if necessary, take appropriate actions to prevent an Action Level exceedance from occurring, and will discuss with EPA the need for and type of additional response measures, as described in Section 9. Further, GE will provide written notice of the exceedance to EPA within 72 hours following receipt of the data showing the exceedance. In the case of an exceedance of the Notification Level, GE may evaluate the data from the upwind monitor(s) to determine whether there is a non-remediation-related source that could be causing or contributing to the exceedance and may include a discussion of that evaluation and of potential upwind non-project sources in the notifications to EPA.

For PCBs, any exceedance of the PCB Notification Level will be reported to EPA as soon as practicable, but no later than 24 hours after receipt of the data showing the exceedance. Additional response actions will be implemented, in consultation with EPA, to prevent exceedances of the Action Level. The actions to be considered in such circumstances include the types of measures described in Section 9. In addition, GE will provide written notice of the exceedance to EPA within 72 hours following receipt of the data showing the exceedance.

8.2 Actions in Event of an Action Level Exceedance

Unless otherwise stated in the project-specific work plan, the following procedures will be followed in the event of an Action Level exceedance.

In the event that the work-day average (minimum 10-hour average) PM_{10} Action Level presented above is exceeded on two consecutive days or any 24-hour average PCB concentration exceeds the PCB Action Level presented above, GE will take the following actions (regardless of any comparison of the results at upwind and downwind monitors): First, immediately upon receipt of the data showing the exceedance, GE will temporarily stop dust-generating or PCB-generating work (as applicable) in the vicinity of the location at which the exceedance was observed, and will report the exceedance and the stop-work event to EPA as soon as practicable, but no later than 24 hours following receipt of data showing the exceedance. In addition, GE will conduct additional air monitoring, if

[14] For the ROR Remedial Action, as described in Section 4 and in the Revised QOL Plan, the PM_{10} monitors will be equipped with an alarm notification system that will be triggered by an exceedance of the PM_{10} Notification Level.

warranted, to confirm the exceedance, and will discuss with EPA appropriate immediate or short-term response actions to address the exceedance. GE will also evaluate the cause of the exceedance and the need for additional engineering or operational controls, discuss that evaluation with EPA (or EPA's oversight representative), and propose to EPA appropriate engineering controls, operational controls, or other corrective actions, as discussed further in Section 9.

The stop-work requirement will continue until potential additional engineering or operational controls (or other corrective actions) have been discussed with EPA (or EPA's oversight representative) and implemented to prevent another exceedance of the Action Level from occurring. In such cases, EPA approval of appropriate response actions will be required before GE can restart operations in the subject area. If an immediate stoppage of work will result in a safety hazard, GE will take actions to stop work activities as soon as possible in a safe manner.

Finally, in the event of an Action Level exceedance for PM_{10} or PCBs, GE will provide written notice to EPA within 72 hours following receipt of the data showing the exceedance.

9 Potential Mitigation Activities

In the event of an exceedance of a Notification Level or Action Level where additional response actions or additional mitigation measures are deemed necessary, GE will implement such measures to address the exceedance. Selection of specific response measures will be determined on a case-by-case basis. In addition to routine operational controls and BMPs, GE may consider the following measures, or other as-yet-unidentified measures, depending on the specific cause of the exceedance and as applicable to the work area:

- Conducting additional monitoring to verify the exceedance or compliance (as noted above);
- Modifying dust-producing operations;
- Use or increasing use of dust suppression measures, such as application of water spray to unpaved haul roads and material staging piles and/or utilizing street sweeping*;*
- Reducing the speed at which material-handling equipment is operated;
- Limiting idling time of diesel-power vehicles and construction equipment;
- Prioritizing management of and reducing staging time for sediments and soils containing high PCB concentrations;
- Using a spray-on cover, biodegradable vapor-suppressive foam, or other temporary cover on exposed soil/sediment or over material stockpiles;
- Controlling the shape and placement of soil/sediment staging piles, and limiting the concurrent disturbance of the piles;
- Adjusting the surface area/volume ratio during material handling;
- Erecting wind screens around material-handling operations;
- Covering the beds of off-road trucks within the remediation areas or along temporary access roads if such trucks prove to be a contributing source of dust or PCB emissions; and/or
- Adjusting air monitoring procedures, if necessary, going forward (e.g., establishing additional monitoring locations, increasing the frequency of monitoring, reducing the laboratory turn-around time for PCBs).

10 Documentation and Reporting

Field data recorded during ambient monitoring will be summarized weekly in reports provided to and maintained by GE and will include the following:

- Date and time of sampling;
- Sampling locations, by global positioning system (GPS) coordinates and notation on a figure;
- Location of work activities with active waste handling by GPS coordinates and notation on a figure showing prevailing wind direction(s);
- Calibration and maintenance activities;
- Parameters monitored;
- Sampling frequency;
- Data results;
- Preliminary quality assurance assessment, as appropriate, of the initial data package, as provided by the laboratory;
- Meteorological data summary; and
- Discussion of problems or disruptions.

A logbook will be used to retain all field notes including information on GPS coordinates of air monitoring stations and specific air samples.

Real-time meteorological and particulate measurements will be retained and managed by an automated DAS such as Aeroqual Cloud or Netronix. Data management systems are an integral part of the data management process and thus are an essential tool (EPA 2021). The site DAS will be configured to do the following:

- Collect and organize a minimum of 15-minute and hourly averages of pollutant concentrations;
- Apply pre-programmed flags to data that meet specified conditions; flagged data can trigger text and email alarm notices;
- Track all changes to data and whom they were made by while retaining the original, unedited, data set;
- Provide a platform for adding qualification, comments related to data quality, and/or links to additional data quality documentation (e.g., corrective action reports);
- Provide a means to analyze and visualize data (e.g., charts and tables);
- Provide a means to retrieve and archive data; and
- Provide a mechanism to output validated data for submittal to a designated website or database.

The particulate and PCB monitoring data collected at the Site will be provided to EPA in monthly status reports under the CD (or at a different frequency if agreed upon by GE and EPA for the subject response action or project).

A summary report on the ambient air monitoring data collected during remediation activities at a given ROR RU will be included in the Interim Remedial Action Completion Report for that RU, as described in the Final Revised ROR SOW. In addition, a summary report on the air monitoring data collected during construction, operation, and closure

of the UDF (but not post-closure monitoring data) will be provided in an appropriate UDF-related submittal to EPA following closure of the UDF. Each of these reports will include a report on the validation of the pertinent PCB data in accordance with Validation Annex 6 of the most recent revised FSP/QAPP. For other response actions or projects involving ambient air monitoring, a summary of the air monitoring data and a validation report on those data will be provided to EPA at the conclusion of the response action or project if required by, and in accordance with, the applicable project-specific work plan.

11 References

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EPA and GE (General Electric Company). 2000. Consent Decree in *United States of America, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company.* Civil Action Nos. 99-30225, 99-30226, 99-30227-MAP, entered by the United States District Court for the District of Massachusetts. October 27.

Attachment E

Construction Quality Assurance Plan

General Electric Company

Construction Quality Assurance Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

Table of Contents

Figure

Abbreviations

Arcadis	Arcadis U.S., Inc.
CD	Consent Decree
CQA	Construction Quality Assurance
CQAP	Construction Quality Assurance Plan
EPA	United States Environmental Protection Agency
GE	General Electric Company
H:V	ratio of horizontal to vertical
Non-River SOW	Statement of Work for Removal Actions Outside the River
POP	Project Operations Plan
QA/QC	quality assurance/quality control
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
ROR	Rest of River
Site	GE-Pittsfield/Housatonic River Site
SOW	Statement of Work
UDF	Upland Disposal Facility

1 Introduction

This revised Construction Quality Assurance Plan (CQAP), which is Attachment E to the revised Project Operations Plan (POP), establishes quality assurance/quality control (QA/QC) activities, requirements, and procedures for construction-related activities to be implemented by the General Electric Company (GE) and its contactors during response actions at the GE-Pittsfield/Housatonic River Site (Site) under the Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection, and other government agencies in October 1999 and entered by the U.S. District Court in Massachusetts on October 27, 2000 (EPA and GE 2000). On January 25, 2024, GE submitted a revision of the CQAP that had been included in GE's July 2013 POP (Arcadis 2013), which had previously been prepared and approved by EPA under the CD and which applied to the Removal Actions that GE was then obligated to perform under the CD (most of which have been completed). That revised CQAP, which was included in GE's January 2024 POP (Arcadis 2024), also presented a Construction Quality Assurance (CQA) program for the activities that are being, and will be, conducted by GE as part of the Remedial Action for the Rest of River (ROR) portion of the Site pursuant to a Revised Resource Conservation and Recovery Act Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020). The ROR that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. EPA provided conditional approval of and comments on the January 2024 POP, including the CQAP, on July 22, 2024, directing GE to submit a further revised plan. This document constitutes that further revised CQAP.

In accordance with the Revised Permit, the ROR Remedial Action includes not only remediation activities, but also the construction and operation of an on-site Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area. The deliverables that GE will submit in implementing the ROR Remedial Action were specified in GE's Final Revised Rest of River Statement of Work (ROR SOW; Anchor QEA et al. 2021), which was approved by EPA.

This revised CQAP describes CQA activities to be implemented during performance of response actions associated with (1) the remaining Removal Actions and other non-ROR activities at the Site under the CD and the associated Statement of Work for Removal Actions Outside the River (Non-River SOW; Appendix E to the CD); (2) the ROR Remedial Action under the Revised Permit and ROR SOW, including remediation activities at the ROR and the construction, operation, and closure of the UDF; and (3) other construction activities conducted by GE at the Site, including future demolition and debris disposition activities for buildings on GE property.[1]

By establishing QA/QC procedures and requirements for the construction-related response actions, the overall objective of the CQAP is to ensure, with reasonable certainty, that a completed response action meets or exceeds its design criteria, plans, and technical specifications, and thus supports the achievement of the Performance Standards that are applicable to each individual response action.

The content in the remainder of this document is organized as follows:

- Section 2 lists and describes the general responsibilities of the parties involved in implementing the CQA activities.

[1] This plan does not apply to the project involving the completed demolition of the former Building 12 and 14 Complexes at the former GE Pittsfield facility and the ongoing consolidation of the resulting demolition debris in the foundations of Buildings 12, 12X, and 12Y – which was authorized under the CD and previously approved by EPA.

- Section 3 describes the typical CQA procedures and activities that will be implemented prior to the initiation of construction activities for a response action.
- Section 4 discusses the CQA activities to be performed during construction activities.
- Section 5 describes the requirements for compiling and summarizing CQA information in post-construction reports on each response action, including the Interim Remedial Action Completion Reports for the ROR Remediation Units (RUs).[2]
- Section 6 provides references for documents cited in the text.

This CQAP contains, by reference, additional information on certain types of general CQA activities expected to be performed during most response actions. It is a generic plan that provides general requirements for implementation of an effective CQA program. This CQAP also incorporates, by reference, the information presented in GE's latest revised Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP: Arcadis 2023a), which was conditionally approved by EPA on March 21, 2024. That FSP/QAPP describes the standard procedures and methodologies to be used for numerous field investigation activities and associated analytical activities.

This plan, as approved by EPA, will be referenced as appropriate in future submittals relating to the ROR RUs or other response actions to be conducted. However, certain activities described in this CQAP may not be applicable to each response action and the corresponding type, scope, and magnitude of the response action activities. In addition, specific procedures will be specified in the project-specific technical design documents or other submittals, including the Remedial Design/Remedial Action (RD/RA) Work Plans and/or the Supplemental Information Package (SIP) for each ROR RU and the revised Final Design Plan and/or SIP for the UDF.[3] Any modifications to the procedures in this CQAP will be presented in those technical design work plans or other submittals for the given response action and will be subject to EPA review and approval.

[2] The RUs that are part of the ROR Remedial Action were identified in GE's Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures (Anchor QEA 2022), approved by EPA on July 6, 2022. They correspond generally to the reaches of the ROR as designated by EPA.

[3] The UDF Final Design Plan was initially submitted to EPA in February 2024 and conditionally approved by EPA on September 12, 2024. In response to that conditional approval, GE will revise the UDF Final Design Plan and will submit the revised plan to EPA by December 20, 2024.

2 CQA Responsibilities

From an overall perspective, GE is responsible for coordinating, performing, managing, and documenting all response actions that are required by the CD, the Non-River SOW, the Revised Permit, and/or the ROR SOW. The type and magnitude of a specific response action will dictate the need for and scope of CQA activities conducted by GE. Given the potential range of response actions that may be conducted, and the corresponding CQA activities, this CQAP establishes several procedures and requirements that can be applied to a variety of response actions. In addition, as previously discussed, the contents of this plan are necessarily general and subject to further definition (as needed) within the technical design documentation prepared for each individual response action.

In the course of performing various CQA activities, GE may enlist the services of one or more non-GE personnel or organizations to assist in managing, observing, testing, and/or documenting the performance of construction activities performed by the remediation/construction contractor. Such personnel or organizations may include consultants to GE or, for particular tasks, specific testing laboratories or other specialty organizations. Such personnel or organization(s) are referred to in this CQAP as “GE’s Representative,” and the CQA responsibilities and activities to be performed by GE or GE’s Representative are referred to herein as to be performed by “GE/GE’s Representative.”

Response actions will be performed under the overall direction and supervision of a GE Project Coordinator and a Supervising Contractor, as described and identified in Section 2.1 of the revised FSP/QAPP. As indicated in that section, there is a different Supervising Contractor from each of GE’s main consultants for work under the CD and Revised Permit. As discussed below, CQA activities will be performed by a number of entities, but all such personnel/organizations performing CQA functions will be under the overall direction and supervision of the GE Project Coordinator and the relevant assigned Supervising Contractor.

Further information regarding the roles of the CQA personnel/organizations is provided below.

2.1 GE Project Manager

For each response action, GE will assign a Project Manager who will serve as the primary point of contact at GE (under the overall supervision of the Project Coordinator) for all phases of the response action and various activities performed as part of that response action. The GE Project Manager will have knowledge of the scope, magnitude, and Performance Standards related to the construction activities to be performed.

With respect to the CQA aspects of a construction-related response action, the general responsibilities of the GE Project Manager include the following:

- Define project objectives, considering the applicable requirements of the CD, Non-River SOW, Revised Permit, and/or ROR SOW;
- Manage the design engineer in development of technical work plans and other technical design deliverables (including the technical specifications) prior to their submission to the EPA;
- Coordinate the CQA activities described in this CQAP and as required in the technical design documentation for the specific response action; and
- Review and evaluate the performance and results of CQA activities with respect to planned requirements.

GE may also assign other GE personnel to assist the GE Project Manager in the CQA activities. All contractors, consultants, and other organizations retained by GE to assist in performing CQA functions will be subject to GE

review (by the GE Project Coordinator, GE Project Manager, or other GE personnel designated by the GE Project Manager). GE will conduct this review to ensure that each organization is capable of and experienced at performing the specific project component. In determining the qualifications of a particular organization, GE will consider several factors, including experience, possession of required certifications, licensing, and project team individuals. In addition, depending on the specific project, GE may also review the qualifications of the key individuals of an organization, considering the individual's experience, licensing, education, etc.

2.2 GE/GE's Representative

When additional GE personnel or non-GE personnel or organizations (i.e., GE's Representative) assist the GE Project Manager in the CQA activities, such parties will be knowledgeable and experienced in the activities that they will be performing (e.g., sampling, testing, construction oversight, etc.). They will also be familiar with the requirements of this CQAP and the response action requirements and Performance Standards set forth in the applicable design submittals for each response action. Based on the response actions previously completed at the Site, as well as the anticipated scope of future response actions, several CQA activities may be performed by GE/GE's Representative, including the following:

- Coordinate the performance of construction activities with the contractor;
- Review the technical design documentation for the specific response action;
- Review technical submittals from the contractor for conformance with the technical design documentation (with a Supervising Contractor to perform final review of all submittals in accordance with Section 3.4);
- Review any significant revisions to the technical design documentation and/or this CQAP;
- Implement the CQA procedures contained in the CQAP and the technical design documentation for the specific response action;
- Observe the performance of construction activities conducted by the contractor for general conformance with the technical design documentation developed for the response action;
- Perform testing for soils, geosynthetic materials, and other construction materials during the implementation of the response actions;
- Review field and laboratory QA/QC testing results for conformance with the technical design documentation;
- Conduct periodic site visits to review progress and QA/QC procedures;
- Review and identify any deficiencies in quality control testing results, including survey results, or procedures so corrective actions can be taken;
- Retain and manage CQA data generated during the construction activities (as described in Section 4.6.4);
- Prepare project status reports as appropriate; and
- Prepare final post-construction reports documenting that the construction for each response action has been completed in conformance with applicable Performance Standards and other requirements (see also Section 5).

2.3 Remediation/Construction Contractor

GE will use qualified remediation or construction contractors to implement the required response actions. (The remediation/construction contractor is sometimes referred to in this CQAP simply as “the contractor.”) The process of selecting a qualified contractor is described in Section 3.3. The contractor will be responsible for performing the work activities in accordance with the technical design documentation developed for the response action, including technical drawings and specifications and other information contained in the technical design documentation. When necessary, the contractor will subcontract with qualified organizations to perform certain aspects of the response actions (e.g., surveys, geosynthetics installation, testing, and specialty construction elements).

2.4 Other CQA Organizations

During the course of the response action, it may be necessary to use other qualified organizations to implement the CQA activities, such as a testing laboratory or a licensed surveyor (including for conventional or hydrographic surveys). The qualifications and responsibilities of each party are described below.

- **Laboratory**—The CQA laboratory will be an independent materials testing laboratory. The laboratory will be responsible for testing soils, geosynthetic materials, and other construction materials during the implementation of the response actions as directed by GE/GE’s Representative and as required by this CQAP. Multiple CQA laboratories may be used for a particular response action based on the testing needs (e.g., separate laboratories may be used for chemical testing and geotechnical testing). Test data and reports completed by the CQA laboratory will be submitted directly to GE/GE’s Representative.
- **Licensed Surveyor**—Surveying activities may include both conventional land surveys (which may also be performed in shallow water) and/or hydrographic surveys. Surveying activities will be performed as needed prior to, during, and at the completion of the response action. These surveying activities are discussed in Section 4.3. As discussed therein, certain of survey activities – including the preparation of a baseline pre-construction survey, verification of removal limits (vertical and horizontal), verification of backfill and cap placement, and preparation of a survey of final site conditions (including excavation and backfilling limits) – are required to be performed by a Professional Land Surveyor licensed in the Commonwealth of Massachusetts and/or a Registered Hydrographic Surveyor certified by the National Society of Professional Surveyors or The Hydrographic Society of America, as appropriate for the type of survey to be performed. The licensed surveyor(s) may be retained by the contractor or GE/GE’s Representative, as discussed in Section 4.3.

3 Pre-Construction CQA Activities

Prior to the implementation of construction-related response actions, GE will perform several CQA-related design and planning activities to ensure that the response actions are conducted in accordance with the technical design documentation. The primary purpose of such pre-construction activities is to facilitate communications among the involved parties related to the technical and implementation aspects of the construction activities. Although the type and scope of the specific activities may vary depending on the specific response actions, it is anticipated that most response actions will involve certain common pre-construction activities, as described below.

3.1 General Development of Technical Design Documents

As appropriate, GE will retain a design engineer to provide remedial design services for a given response action. The design engineer will possess experience on remedial projects of similar magnitude and complexity to the activities being undertaken at the response action. Additionally, the design engineer must be knowledgeable about the project requirements and Performance Standards and must understand the requirements of this CQAP.

The design engineer will prepare the technical design documents in compliance with the applicable Performance Standards and other requirements of the CD, non-River SOW, or Revised Permit, evaluating pre-design information collected for the response action, and preparing the technical design documentation for each response action in consultation with GE. As needed, the design engineer will develop technical specifications which, as described in Section 3.2 below, will serve as a component of the technical design documentation provided to EPA. In preparing the technical specifications, the design engineer will also prepare a comprehensive list of required technical submittals to be prepared by the contractor and a schedule for submittal.

3.2 Technical Specifications

For several construction-related response actions, technical specifications will be developed by the design engineer in consultation with GE. These specifications will be a component of the technical design documentation provided to EPA for review and approval and will define the acceptable construction materials and equipment and the performance requirements or criteria for the work to be performed by remediation/construction contractor. Additionally, the specifications may, depending on the activity, identify the quality control testing required of the contractor. The technical specifications will identify required technical submittals to be prepared by the contractor, discussed further in Section 3.4, and a schedule for submittal.

3.3 Remediation/Construction Contractor Qualification

Prior to the selection of a remediation/construction contractor, GE will perform a contractor qualification process to ensure that the contractor is qualified to perform the proposed construction-related activities. This qualification process will include a review of the contractor's experience (and that of any subcontractors, as appropriate) on projects of similar scope and magnitude. The contractor will also be required to demonstrate that, at a minimum, its project manager, quality control manager, safety manager, and field foreman have experience with similar types of construction projects and are familiar with the activities required as part of the response actions.

3.4 Technical Submittals

For several elements of construction, the contractor will be required to prepare technical data (e.g., proposed equipment, material test results) and plans for review by GE/GE's Representative and inclusion, as appropriate, in the technical design documentation submitted to EPA for each response action. This requirement is intended to document the contractor's understanding of the design and thus minimize the potential for misinterpretation that could impact the outcome of the response action. The submittal of technical data encompasses many elements of the construction activity. In general, technical submittals that will be required as part of the response actions may include the following:

- Implementation-related plans and procedures, including proposed equipment, means, and methods to meet the design requirements;
- Material information and test data;
- Performance data;
- Technical drawings;
- Operating descriptions;
- Layout drawings; and
- Detail drawings.

These technical submittals may be included in an operations plan (or plans) to be prepared by the contractor and included in the project-specific SIP. Some technical submittals will be required before mobilization for a response action, and others will be required during construction but before implementation of specific tasks related to the requirement for the technical submittal.

The technical specifications will identify the technical submittals, if any, that will be required in connection with the topic covered by that specification. Any proposed modifications to the approach for implementing the work as outlined in the technical design documentation related to a specific response action, or any deviations from the information contained in this CQAP, will be identified within these submittals for review and acceptance by GE/GE's Representative. Any significant modifications will be subject to EPA review and approval.

The technical submittal review process will be essential to the QA/QC process before the associated construction is initiated. GE/GE's Representative will maintain a register of technical submittals required from the remediation/construction contractor. This register will be used to track the status of contractor submittals and corresponding review by a Supervising Contractor. This register will also identify which of these submittals from the contractor are to be reviewed by the GE Project Manager. In addition, EPA reserves the right to request certain submittals be provided to EPA for review.

The contractor's submission of a technical submittal will constitute its representation that the contractor has determined and verified all quantities, dimensions, field construction criteria, materials, model numbers, and similar data set forth in that submittal. In addition, the contractor's submittal will demonstrate that it has reviewed and/or coordinated that submittal with the applicable requirements of the technical design documentation. The review of technical submittals will include determining general compliance with the design documentation, as appropriate. Technical submittals will be reviewed and stamped by a Supervising Contractor as follows:

- “Reviewed” if no objections or comments are made;
- “Reviewed and Noted” if minor objections, comments, or additions are made but resubmittal is not considered necessary;
- “Resubmit” if the objections, comments, or additions are extensive, or if transmittal to another party is required; and
- “Rejected” if the submittal is not acceptable, even with reasonable revision, or when the data submitted are not sufficiently complete to establish compliance with the technical specifications or drawings. In this case, the contractor must resubmit a new or modified submittal that meets the scope and intent of the work specified in the technical specifications or drawings.

The contractor will not be permitted to perform any activity that directly or indirectly involves the item covered by the technical submittal until a “Reviewed” or “Reviewed and Noted” stamp is provided by the Supervising Contractor.

3.5 Pre-Construction Meeting

Prior to the start of construction activities, a pre-construction meeting will be held with GE/GE’s Representative, the contractor, and possibly the design engineer, depending on the response action. The topics covered at this meeting may include some or all the following:

- Familiarizing each organization with current site conditions, the scope of the response action, the applicable design documents, the site-specific QA/QC procedures, and this CQAP's role relative to the design intent, requirements, criteria, plans, and specific information;
- Discussing other applicable components of the POP (e.g., the Site Management Plan, the Ambient Air Monitoring Plan, the Contingency and Emergency Procedures Plan), including components submitted under separate cover (e.g., the FSP/QAPP and the Site Health and Safety Plan [Arcadis 2023b]);
- Discussing the established procedures and protocols for any construction change orders, deficiencies, repairs, and retesting;
- Discussing how adaptive management will be applied to the response actions, as applicable;
- Reviewing quality-of-life compliance requirements, as specified in GE’s Revised Quality of Life Compliance Plan (Anchor QEA and Arcadis 2024), as well as pertinent community considerations;
- Reviewing requirements and procedures for verifying and demonstrating compliance that construction meets the design and technical specification requirements;
- Reviewing methods of documenting and reporting data;
- Reviewing work area security and safety protocols;
- Discussing procedures for the location and protection of construction equipment and materials, and for the prevention of damage of equipment and materials from inclement weather or other adverse conditions; and
- Conducting a site walk-through to review site conditions, including work areas and approximate limits of work, as well as staging and storage locations.

4 CQA Activities During Construction

During the active construction phase(s) of response actions, several QA/QC mechanisms will be implemented to monitor the progress, assess the activities as they relate to the attainment of the applicable Performance Standards and other requirements, and identify, as early as possible, any issues that may affect the performance and schedule of the construction activities.

This section describes, in general terms, CQA activities common to multiple response actions. Because the designs for the ROR Remedial Action (including the various RUs and the UDF) and other future response actions have not been completed and, in many cases, will not begin for many years, additional CQA requirements will be identified, as necessary, in the project-specific work plans (e.g., the RD/RA Work Plan and/or SIP for each ROR RU and the Final Design Plan and/or SIP for the UDF) and may warrant future modification or amendment to this CQAP to address the CQA requirements identified in the associated design documents. For example, the Performance Standards in the Revised Permit require that an amendment (e.g., activated carbon) be applied to certain portions of the river and floodplain; however, details will need to be advanced during the remedial design before CQA requirements can be specified.

4.1 Mobilization/Site Preparation

The remediation/construction contractor will mobilize to the applicable portion of the Site and conduct site preparation activities in accordance with the technical design documentation and approved contractor submittals. Site preparation activities conducted by the contractor will include the following:

- Coordinating with local utilities, as necessary, for relocation of existing utilities, installation of new utilities, access to potable water, etc.;
- Verifying existing site conditions;
- Mobilizing labor, equipment, and materials;
- Constructing remediation operation and support areas, as needed, such as administrative areas, material staging areas, storage areas, secondary containment for fuel storage, and equipment, material, and personnel decontamination areas;
- Installing soil erosion and sediment control measures, as required; and
- Establishing work area(s) and installing signage and temporary or permanent fencing around the perimeter of the work area, where applicable.

During mobilization/site preparation activities, GE/GE's Representative will conduct the following QA/QC activities:

- Reviewing equipment and materials brought to the Site by the contractor to verify that they are consistent with the contractor's approved submittals and for general cleanliness and working condition; and
- Reviewing soil erosion and sediment control measures installed by the contractor.

4.2 Site Management

The contractor will provide and maintain site management throughout the implementation of each response action in accordance with the approved plans and specifications and as directed by GE/GE's Representative. These site

management activities will include implementation of the security/control measures described in GE's Site Management Plan (Attachment C to the POP), as well as appropriate and applicable control measures for dust, PCB air emissions, noise, lighting, odor, and soil erosion and sedimentation throughout the construction activities. These control measures will be implemented in accordance with the applicable plans and design documentation, such as GE's revised Ambient Air Monitoring Plan (Attachment D to the revised POP), GE's Revised Quality of Life Compliance Plan, and technical design documentation for each response action. GE/GE's Representative will be responsible for verifying that the appropriate site management measures are implemented and maintained in accordance with the applicable plan(s).

4.3 CQA Survey Control

As part of each response action, construction surveys will be performed to ensure/document conformance with the technical design documentation. The survey activities will generally include establishing pre-work (baseline) elevations, grades, and conditions; performing surveys during the construction activities to verify lines, grades, and levels; documenting testing and sampling locations; conducting surveys to calculate quantities and track the progress of work; and surveying final site conditions for preparation of as-built documentation. The survey activities will be conducted in accordance with the procedures outlined in the remainder of this section, unless otherwise specified in the specific design submittals for the response action. Certain CQA survey activities outlined below will be performed by a licensed surveyor or Registered Hydrographic Surveyor retained by the contractor or GE/GE's Representative. Other survey activities, where conducted, may be performed directly by the contractor or GE/GE's Representative.

CQA verification surveys can generally be divided into two categories to verify construction is compliant with the design requirements: (1) actions involving removal (including excavation and dredging) of materials, and (2) actions that entail placement of soil backfill, aggregate, asphalt, and/or geosynthetic materials (e.g., to backfill excavated areas or to construct engineered barriers/caps and soil covers).

For some response actions, the contractor will perform progress surveys and quality control (QC) surveys before or in conjunction with CQA verification surveys to estimate quantities and track the progress of work. Surveys will also be conducted by the contractor to locate and document the condition of the utilities, structures, or other ancillary items (e.g., structures, pipelines, manholes, ditches, utilities, etc.) included within the scope of a specific response action.

4.3.1 Survey Procedures for Removal Activities

The following is a general description of the field survey procedures to be used during the performance of response actions that require removal of soils, sediments, or other materials, unless otherwise specified in the specific design submittals for the response action. Such general procedures include establishment of control points, performance of pre- and post-removal survey, and data management practices to ensure that the design has been achieved.

Hydrographic survey requirements will differ from those used on land, including for the performance of pre-removal surveys and for verification of removal depths and elevations. Hydrographic surveys are typically performed with single- or multi-beam sub-bottom profiling and/or sonar survey equipment operating from the

surface of the waterbody. Where water depths restrict the use of such equipment, survey data can be collected using conventional (i.e., typical land-based) survey methods.

Requirements for land-based and water-based survey activities, such as spacing requirements, tolerances, and accuracy, will be provided in technical specifications associated with the project-specific work plans (e.g., the Final RD/RA Work Plan for each ROR RU, the revised Final Design Plan for the UDF) and will consider the project-specific conditions and requirements.

Temporary Control Points

The contractor will establish and maintain survey control benchmarks to be used for the duration of the project work and develop and maintain any offsets and temporary control points needed to monitor and manage removal depths and elevations during the construction activities.

Pre-Removal Survey

Prior to the performance of removal activities, a pre-removal survey will be conducted by a licensed surveyor or Registered Hydrographic Surveyor. The results of the survey will be used to establish the pre-work conditions of the removal area. These data will be used to define baseline elevations when verifying removal thicknesses, support removal quantity calculations, and establish elevations and grades for backfilling and restoration, as applicable.

The pre-removal survey may be performed as part of the design phase (and included in the technical design documentation provided to the contractor) or after the design and before construction.

Before initiation of excavation activities on land, a pre-removal survey chart may be prepared if required by the technical specifications for the response action. The pre-excavation survey chart, if required, will show the survey points associated with pre-work topographic conditions and the targeted removal depths, both generally and for any unique features of the excavation (e.g., materials with different disposition requirements). For each such point, the chart will provide the pre-excavation elevation, the target excavation depth or elevation, and the restoration elevation, as described in the technical design documentation. This chart will be completed by the contractor during the response actions.

Before initiation of in-water removal activities, a pre-removal survey surface may be prepared if required by the technical specifications for the response action. The pre-removal survey surface, if required, will show the pre-work elevations and grades for the in-water removal areas. Where necessary, the pre-removal survey surface will be generated by interpolation of data collected by hydrographic and conventional survey methods. The technical specifications and project-specific work plans (e.g., the Final RD/RA Work Plan for each ROR RU) will define how the pre-removal surveys will be used. Where depth-based removal actions are specified, the pre-removal elevation survey may be used to develop a surface with target removal elevations (based on subtracting the targeted removal depths from the pre-work elevations). Where restoration of the removal area to pre-removal conditions is specified, the pre-removal elevation survey may be used to establish the target restoration elevations. Alternate methods for documenting comparison of pre- and post-removal and post-backfill surveys may be identified in the technical specifications or proposed by the contractor.

Verification of Removal Depths and Elevations

As the removal reaches the required elevation or depth, the contractor may perform progress and QC surveys or use other methods (e.g., grade stakes) to track the progress of the removal. Once the contractor provides notice to GE/GE's Representative that the target removal depths/elevations have been achieved, a post-removal CQA survey will be performed by a licensed surveyor or Registered Hydrographic Surveyor. Where required, the pre-removal survey chart will be updated to reflect post-removal conditions for land-based removal actions. For in-

water removal actions, the post-removal CQA survey data will be used to generate a post-removal surface that will be compared with the target removal elevations or depths. The post-removal survey data will be evaluated to verify that the removal is compliant with the design requirements and that the required removal depths and/or elevations have been achieved within allowable tolerances as defined in the technical specifications. Details for the verification of the removal depths and elevations will be determined during the design process and be described in technical specifications associated with the project-specific work plans (e.g., the Final RD/RA Work Plan for each ROR RU, the revised Final Design Plan for the UDF) and will consider the project-specific conditions and requirements. EPA may request the ability to review and approve post-removal excavation grades prior to backfill.

4.3.2 Survey Procedures During Backfilling, Cap/Cover Installation, and Riverbank Reconstruction Activities

This section discusses the survey activities to be performed during response activities (including activities at the UDF area) that entail installation of soil, aggregate, asphalt, and/or geosynthetic cover materials and construction of embankments, unless otherwise specified in the design submittals for the response action. In general, the surveys will be conducted to verify and document the satisfactory placement of fill or graded material over the required areas and to the required elevations, grades, and/or thicknesses. In some cases, separate surveys will be required for individual layers or lifts of an engineered cap or cover. Additionally, EPA may request verification of individual layers or lifts, including, but not limited to, cap isolation layers, by a licensed surveyor or Registered Hydrographic Surveyor.

Site Construction Plan

Prior to the installation of backfill, a land-based engineered barrier/cap or soil cover, a subaqueous sediment cap, or riverbank reconstruction material (collectively referred to in this section as backfill, cap/cover, or reconstruction material), a construction plan(s) will be prepared, where required by the response action design, based on the design requirements and/or a site survey conducted by a licensed surveyor or Registered Hydrographic Surveyor. Where applicable, the plan will depict the final elevations and contours or thicknesses of the backfill, cap/cover, or reconstruction material. The site construction plan will be prepared in conjunction with the associated design or, where applicable, during the construction phase based on the pre-removal survey or post-removal survey prior to material placement.

Temporary Control Points

The contractor will establish and maintain survey control benchmarks to be used for the duration of the project work and develop and maintain any offsets and temporary survey control points necessary for the layout of all lines, grades, and levels for the proper construction of the work. GE/GE's Representative may also use these points to monitor the material lift thicknesses, slopes, and grades during construction.

Survey During Cover Construction Operations

The soil, aggregate, and/or geosynthetic materials comprising a cap/cover or reconstruction material will be installed by the contractor in accordance with the technical design documentation. The installation of the construction materials will be monitored by the contractor and GE/GE's Representative. For certain response actions, monitoring activities will consist of survey verification along an appropriately sized grid specified in the design documentation depending on the areal extent, type, and location of the backfill, cap/cover, or reconstruction material, at points where the slope changes, and/or at critical intersection points (e.g., drainage discharge points, the intersection line of the cover and the adjacent existing grades, etc.). At each point, horizontal

and vertical elevation data will be obtained and used to determine conformance with the technical design documentation. Specific items to be verified may include subgrade elevations, lift and layer thicknesses and elevations, slopes, and horizontal limits.

Embankments

The construction of soil embankments (e.g., for berms, ditches, etc.) will be required in certain response actions. Survey measurements during embankment construction will be conducted by the contractor to determine conformance with the technical design documentation. Verification of these measurements may be performed by GE/GE's Representative periodically during construction.

Sloped Areas

For backfill/restoration of sloped areas, including riverbanks, verification methods will be adjusted where necessary to verify that surveyed elevations are representative of intended backfill thicknesses, which are typically designed as being perpendicular to the slopes. Where verification of backfill thicknesses is needed along sloped areas, correction factors will be applied to calculate the backfill/restoration thicknesses after comparison of the pre- and post-placement survey elevations. The correction factors will vary based on the angle of the slope. Final verification methods for sloped areas will be determined during design and be described in technical specifications associated with the project-specific work plans (e.g., the Final RD/RA Work Plan for each ROR RU, the revised Final Design Plan for the UDF). Example correction factors are outlined as follows:

- For areas with approximate slopes of 1 horizontal to 1 vertical (1H:1V), the difference between the pre-placement surface and post-placement surface survey elevations will be divided by 1.4 to calculate the backfill thickness perpendicular to the slope;
- For areas with approximate slopes of 1½H:1V, the difference between the pre-placement surface and post-placement surface survey elevations will be divided by 1.2 to calculate the backfill thickness perpendicular to the slope; and
- For areas with approximate slopes of 2H:1V, the difference between the pre-placement surface and post-placement surface survey elevations will be divided by 1.1 to calculate the backfill thickness perpendicular to the slope.

Figure E-1 below illustrates a visual of how this correction factor was determined for a slope of 2H:1V.

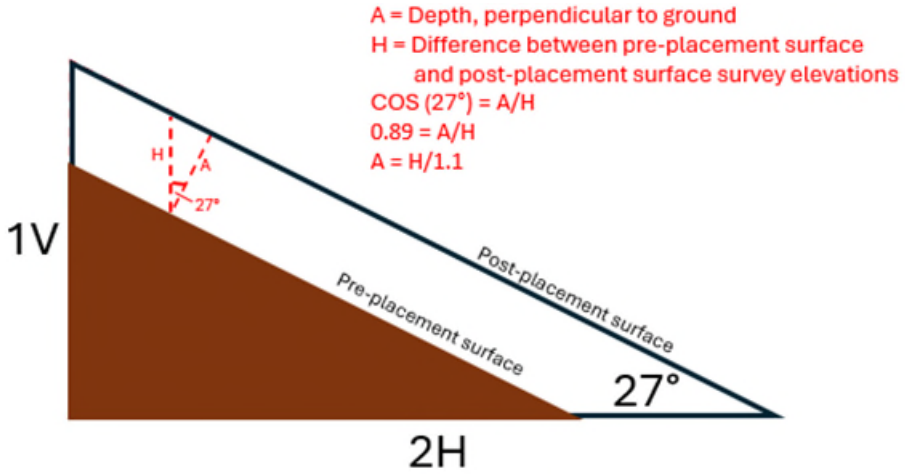

Figure E-1: Illustration of Example Calculation for Survey Adjustment for Sloped Areas

Final Survey

Once backfill, cap/cover, bank reconstruction, or embankment construction operations and the associated restoration activities are complete, a licensed surveyor or Registered Hydrographic Surveyor will perform a final survey to document the completed construction activities and will prepare a record (as-built) drawing. Final grades and elevations, as well as the locations and dimensions of any new structures (e.g., manholes, culverts, etc.), will be recorded on the record drawing. This drawing will include an updated post-removal survey data chart (if a data chart is required) that will record the final restored elevations. The final record drawings will be submitted as a component of the post-construction report for each response action, as described in Section 5.

4.4 CQA Requirements for Soil Removal and Backfilling

Many response actions will involve the removal of existing soils, sediments, and other materials, and replacement with acceptable backfill soils. QA/QC procedures for these activities will be implemented prior to and during the removal and backfilling activities to ensure that the construction is completed in compliance with the approved design and applicable Performance Standards. Specific technical requirements for the removal and backfilling activities will be developed by the design engineer for each response action.

The CQA testing and observation activities that will be performed by GE/GE's Representative during the removal and backfilling activities will be identified in the technical design documentation for each response action. These CQA activities will include the procedures and requirements described in the technical specifications included in the design documentation. In addition to the survey activities described in Section 4.3, the CQA activities for the removal and backfilling will include observations that the work is being conducted in accordance with the performance requirements of the design. The CQA activities for removals also may include additional supporting activities, such as additional waste characterization sampling to determine appropriate material handling (segregation) for material disposal or reuse. The CQA activities for backfilling will also include certification of import material quality to verify that the chemical and physical characteristics of the materials to be used for backfilling are compliant with the design requirements and the revised Soil Cover/Backfill Characterization Plan (Attachment B to the revised POP), and will also include compaction testing if required for the response action.

4.5 CQA Requirements for Landfill Caps, Land-Based Engineered Barriers, and Soil Covers

Certain response actions will involve the installation of a landfill cap, land-based engineered barrier, or other type of soil cover. For example, the UDF will ultimately be covered by an impermeable landfill cap. Depending on the purpose of each, as well as the applicable Performance Standards, construction of the cap, engineered barrier, or cover may include a combination of soils, aggregates, geosynthetics, clay, asphalt, concrete, and/or vegetated topsoil. In addition to the survey activities described in Section 4.3, the CQA activities pertaining to these construction materials are discussed below.

4.5.1 Soils/Aggregates

Soil/aggregate layers that could be installed in a landfill cap, engineered barrier, or soil cover include a subgrade/subbase layer, a barrier layer, a drainage layer, a barrier protection layer, and a topsoil layer. The CQA activities pertaining to these soil material types (e.g., compaction testing, particle size requirements) will be identified in the technical design documentation for each response action, including the Final Design Plan, SIP,

and/or Final Cover/Closure Plan for the UDF. These activities will include the procedures and requirements described in the technical specifications, also to be provided in the technical design documentation for each response action.

At a minimum, imported soil and aggregate materials will be subject to testing to verify that the chemical and physical characteristics of the materials are complaint with the design requirements and the Soil Cover/Backfill Characterization Plan (Attachment B to the POP).

4.5.2 Geosynthetics

A geosynthetic material may be used as a barrier layer in construction of the UDF and staging areas. This material will consist of a high-density polyethylene liner and/or a geosynthetic clay liner. Other geosynthetic materials that may be used within a landfill cap, engineered barrier, or soil cover include a geotextile and a geosynthetic drainage composite. A geotextile may be used as a cushioning, separation, and/or a filtration layer, and a geosynthetic drainage composite may be used as a drainage layer. The CQA activities required for the testing and installation of the geosynthetics will be identified in the technical design documentation for each response action. These activities will include the procedures and requirements described in the technical specifications, also to be provided in the technical design documentation for each response action. CQA activities required for the testing and installation of the geosynthetics may include HDPE seam weld field/destructive testing and field verification that delivered materials comply with approved technical specifications.

4.5.3 Asphalt/Concrete

An asphalt or concrete layer may be installed at some response action areas as the uppermost component of a cap, barrier, or cover system. In these instances, the asphalt or concrete cover will be installed on a prepared subbase layer, and will serve as a low-permeability barrier, promoting stormwater run-off and limiting infiltration. The CQA activities associated with installing the asphalt or concrete cap (e.g., grading, compaction testing, material requirements) will be described in the design documentation for each response action involving the installation of an asphalt or concrete cover.

4.6 CQA Requirements for Subaqueous Engineered Caps

Certain response actions (notably, the remediation actions for several RUs in the Housatonic River) will involve the installation of an engineered cap in submerged or frequently submerged areas. Different approaches may be used for verification of the engineered caps in different portions of the Site, depending on the location-specific cap designs, the cap construction methods, and the hydraulic conditions at the cap location. It is anticipated that the cap areas will be subdivided into certification units based on location and operational considerations to track and facilitate timely completion of activities within individual work units. The cap certification unit layouts will be developed during the design or in coordination with the selected remediation contractor and used as a basis for verifying compliance with cap placement criteria.

The remainder of this section lists CQA steps that are anticipated for installation of subaqueous engineered caps. Because the designs for the engineered caps will be completed in the future, additional CQA requirements will be identified, as necessary, in the project-specific design plans (e.g., the RD/RA Work Plans for each ROR RU involving such capping) and may warrant future modification or amendment to this CQAP to address the CQA requirements.

4.6.1 Verification of Import Material Quality

The chemical and physical characteristics of the cap materials will be verified for their intended use in accordance with the approved design for the subject response action and in accordance with the Soil Cover/Backfill Characterization Plan (Attachment B to the POP).

4.6.2 Verification of Specified Thicknesses/Elevations and Extent

The placement of the capping materials over the required extents and to the required thicknesses or elevations provided by the design will be verified by survey or physical measurements. In some cases, separate surveys or physical measurements will be required for individual layers or lifts of the engineered cap. Engineered cap layers that are designed to meet a specified elevation will be verified using survey methods as discussed in Section 4.3. Engineered cap layers that are designed to meet a specified thickness may be demonstrated using a combination of hydrographic surveys, physical measurements (e.g., core sampling, catch pans, or grade stakes), and/or placement equipment positioning records. The design requirements and verification procedures for the engineered caps will be described in the associated design documents and technical specifications.

4.6.3 Verification of Amended Cap Layer Content

For engineered caps that include an isolation layer with specified amendment content, verification methods will be developed during the remedial design phase to document that the amendment content achieves the design requirements. It is anticipated that the amendment content will be verified by some combination of testing and material tracking and placement records; the specific verification methods will be dependent on the specified amendment type and dose.

During cap placement, isolation layer material quantities will be tracked to document the applied amendment dosing on a daily basis, including quantities of the base material (e.g., sand) and the amendment. Where applicable based on the design requirements, the material quantities will be recorded as dry weights using conversion factors to be established for each material type. Amendment testing may be conducted on pre-placement (ex-situ) and/or post-placement (in-situ) samples collected from the isolation layer material to verify that the applied amendment dose achieves the design requirements. The testing methods will be determined during design based on the specified amendment type and dose; they may include (but are not limited to) thermal drying methods or density separation methods to determine the amount of amendment per unit weight of isolation layer material. The frequency and methods for isolation layer sampling and testing will be determined during design, and the design requirements and verification procedures for the amendment, where applicable, will be described in the associated design documents and technical specifications. It is anticipated that the sampling/testing frequency may be adjusted as the work progresses and sufficient data are generated to verify adequate placement.

4.7 Documentation

The documentation of CQA activities will support the demonstration that the construction activities were carried out in accordance with the technical design documentation. The documentation process includes identification of construction tasks that should be observed, tested, and documented; assignment of responsibilities for the observation, testing, and documentation of these tasks; and finally, the completion of the reports, data sheets, forms, and check lists as necessary to provide an accurate record of the work performed during construction.

GE/GE's Representative will prepare the appropriate reports, data sheets, forms, and check lists, as described below, to document that the appropriate CQA activities have taken place.

4.7.1 Construction Summary Records

Construction summary records will be maintained by GE/GE's Representative to document the construction activities. The construction summary records will typically contain the following information:

- Date, project name, location, and the names of any visitors accessing the work area;
- Description of weather conditions;
- The contractor's personnel, equipment, and materials delivered to or removed from the work area;
- Description of work in progress;
- Results of any CQA testing; and
- Problem/deficiency identification and documentation describing any corrective actions performed for field problems and non-conformance with the technical design documentation and/or this CQAP.

4.7.2 Deficiency Identification and Correction

Construction summary records will include documentation of problems and/or deficiencies noted during construction (e.g., when construction material or activities are observed or tested that do not meet the requirements established in this plan) and corrective action employed to address the problems or deficiencies. Problem and deficiency identification and corrective action documentation may include the following information:

- A description of the problem or deficiency, including any references to supplemental data or observations related to the problem or deficiency;
- Location of the problem or deficiency, including how and when the problem or deficiency was discovered; and
- The corrective action taken or to be taken to resolve the problem or deficiency.

GE/GE's Representative will determine whether the problem or deficiency is an indication of a situation that might require changes to the technical design documentation and/or the CQAP. If such a situation develops, a meeting will be held with GE/GE's Representative and the design engineer to determine if revisions to the technical design documentation and/or this CQAP should be made. Any significant revisions to the technical design documentation and/or CQAP will be reviewed by GE/GE's Representative with the design engineer and submitted for review and approval by EPA.

4.7.3 Photographic Documentation

Photographs may be taken to supplement written CQA information and to document observations, problems, deficiencies, work in progress, and completed work. Pertinent information related to the photographs (e.g., date, time, location of photographs) will be documented in the construction summary record or a log book.

4.7.4 CQA Data Management

The management of CQA data generated throughout the response actions will be the responsibility of GE/GE's Representative. These data may include the following:

- Data sheets;
- Photographic logs;
- Field sampling and testing results;
- Laboratory analytical results;
- Health and safety monitoring results;
- Equipment calibration and testing results;
- Construction summary records; and
- Documentation identifying corrective measures taken to resolve any problems or deficiencies, including any significant revisions to the technical design documentation, CQAP, or the technical submittals to resolve such problems or deficiencies.

Pertinent data will be compiled and presented in the Final Completion Report, as discussed in Section 5.

4.8 Site Inspections/Reviews

Site inspections/reviews will be conducted by GE/GE's Representative at various times during the response action activities. A brief description of the site inspections/reviews that may be conducted is provided below.

4.8.1 Pre-Excavation Inspection

Prior to the start of active excavation or dredging activities, and possibly in conjunction with the pre-construction meeting described in Section 3.5, GE/GE's Representative and the remediation/construction contractor will conduct a pre-excavation site inspection to determine that procedures and equipment necessary to perform the response actions are in place and operational, that the contractor is prepared to efficiently manage the various waste streams to be generated during the remediation activities, and that the contractor has taken steps to comply with the requirements of the Site Health and Safety Plan, Contingency and Emergency Procedures Plan (Attachment F to the POP), Site Management Plan (Attachment C to the POP), and other relevant plans.

If deficiencies are noted during the pre-excavation inspection, the contractor will be required to take corrective actions. Once approved by GE, construction activities may proceed.

4.8.2 Routine Inspections

During performance of the construction-related response action, GE/GE's Representative will conduct routine inspections to evaluate whether construction is progressing in accordance with the technical design documentation. If deficiencies are noted during those routine inspections, the contractor will be required to take corrective actions. If corrective action is required, the contractor will complete the activities within a timeframe agreed-upon with GE/GE's Representative.

4.8.3 Project Progress Meetings

As appropriate, project progress meetings will be held periodically and will be attended by GE/GE's Representative and the remediation/construction contractor. The purpose of the meetings will be to do the following:

- Review recent work activities;
- Review any health and safety issues;
- Review the upcoming work schedule and overall project schedule;
- Discuss the contractor's personnel and equipment assignments for the near-term work;
- Discuss any design or construction technical support needs, implementation issues, and possible solutions;
- Discuss results of ongoing inspections conducted during the performance of the work;
- Review test data; and
- Discuss any outstanding issues.

The project progress meetings may be documented by GE/GE's Representative, in which case prepared meeting minutes would be transmitted as needed to the attending parties.

4.8.4 Pre-Final Inspection

Near the completion of the construction-related response action, GE/GE's Representative and the remediation/construction contractor will conduct a pre-final inspection. The pre-final inspection will consist of a site walk-through to evaluate the completeness of the construction and its consistency with the technical design documentation.

Following the pre-final inspection, GE/GE's Representative will either specify activities to address any deficiencies or deviations from the design documentation, as appropriate, or will determine that construction of the response actions is complete. If additional construction activities are required, GE/GE's Representative will prepare a list of outstanding items and a corresponding schedule to complete the activities for review by the contractor. The contractor will then complete the additional activities within the timeframe set forth in the agreed-upon schedule.

5 Post-Construction Reports

At the completion of each response action, the QA/QC information obtained throughout the construction period (including pre-construction activities) will be compiled and summarized in the Interim Remedial Action Completion Report for each ROR RU or other final completion report for the response action involved. It is anticipated that each such report will include the following types of construction-related QA/QC information, as applicable:[4]

- Description and results of QA/QC testing performed prior to and during the response action;
- A summary of all deviations from the design submittals as approved by EPA.
- A summary of relevant field observations and tests conducted (including topographic surveys), laboratory samples collected (if any), and test results reported, as they relate to the construction activities performed;
- A summary of problems and deficiencies encountered during construction and the resolutions;
- Record (i.e., “as-built”) drawings, including post-removal surveys, final post-restoration elevation surveys, drawings showing changes in channel geometry, and drawings showing backfill materials and associated thicknesses; and
- Documentation that applicable QA/QC criteria for key construction activities were met, including a comparison of documented procedure data with proposed technical design documentation and requirements set forth in this CQAP.

In addition, a summary of the CQA-related construction activities conducted at the UDF, including the same information listed above, will be provided in an appropriate UDF-related submittal to EPA following closure of the UDF.

[4] The following is a CQA-related subset of the list of items specified in Section 5.5 of the ROR SOW to be included in the Interim Remedial Action Completion Report for each ROR RU.

6 References

Anchor QEA (Anchor QEA, LLC). 2022. Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures. Prepared for General Electric Company, Pittsfield, Massachusetts. July 5.

Anchor QEA, AECOM, and Arcadis (Arcadis U.S., Inc). 2021. Final Revised Rest of River Statement of Work. Prepared for General Electric Company, Pittsfield, Massachusetts. September 14.

Anchor QEA and Arcadis. 2024. Revised Quality of Life Compliance Plan – Housatonic River – Rest of River. Prepared for General Electric Company, Pittsfield, Massachusetts. November 22.

Arcadis. 2013. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised July.

Arcadis. 2023a. Field Sampling Plan/Quality Assurance Project Plan – GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company. Revised December 21.

Arcadis. 2023b. Site Health and Safety Plan – GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised July 17.

Arcadis. 2024. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised January 25.

EPA (U.S. Environmental Protection Agency). 2020. Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River. December 16.

EPA and GE (General Electric Company). 2000. Consent Decree in *United States of America, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company*. Civil Action Nos 99-30225, 99-30226, 99-30227-MAP, entered by the United States District Court for the District of Massachusetts. October 27.

Attachment F

Contingency and Emergency Procedures Plan

General Electric Company

Contingency and Emergency Procedures Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

Table of Contents

Exhibits

Abbreviations

Arcadis	Arcadis U.S., Inc.
CD	Consent Decree
CEPP	Contingency and Emergency Procedures Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
GE	General Electric Company
HASP	Health and Safety Plan
MassDEP	Massachusetts Department of Environmental Protection
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
RD/RA	Remedial Design/Remedial Action
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
ROR	Rest of River
RU	Remediation Unit
SIP	Supplemental Information Package
Site	GE-Pittsfield/Housatonic River Site

1 Introduction

This revised Contingency and Emergency Procedures Plan (CEPP), which is Attachment F to the revised Project Operations Plan, describes the activities that will be followed by the General Electric Company (GE) and its contractors to minimize the likelihood of releases, fires, explosions, medical injuries, or other similar emergency situations during performance of investigative and remediation activities at the GE-Pittsfield/Housatonic River Site (the Site) under the Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MassDEP), and other government agencies in October 1999 and entered by the United States District Court in Massachusetts on October 27, 2000 (EPA 2000). On January 25, 2024, GE submitted a revision of the CEPP that had been included in GE's July 2013 Project Operations Plan (Arcadis 2013), which had previously been prepared and approved by EPA under the CD and which applied to the Removal Actions that GE was obligated to perform under the CD (most of which have been completed). That revised CEPP, which was included in GE's January 2024 POP (Arcadis 2024), also incorporated contingency and emergency procedures for the activities that are being, and will be, conducted by GE at the Rest of River (ROR) portion of the Site as part of the ROR Remedial Action pursuant to a Revised Resource Conservation and Recovery Act Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020). The ROR is that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. EPA provided conditional approval of and comments on the January 2024 POP, including the CEPP, on July 22, 2024, directing GE to submit a further revised plan. This document constitutes that further revised CEPP.

This revised CEPP describes the precautionary/preventative measures that will be taken to minimize the likelihood of releases, fires, explosions, medical injuries, or other similar emergency situations during performance of (1) future activities at the Site associated with the remaining Removal Actions and other non-ROR activities under the CD and the associated Statement of Work for Removal Actions Outside the River (Appendix E to the CD); (2) the ROR Remedial Action under the Revised Permit, including investigation, remediation, restoration, and support activities at the ROR and construction and operation of an Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area; and (3) other activities conducted by GE at the Site under the CD, including the future disposition of building demolition debris.[1] In addition, for such emergency situations that occur or are anticipated to occur, this CEPP outlines the emergency measures and procedures that will be implemented.

This CEPP will be referenced as appropriate in future submittals relating to the various activities, including the Remedial Design/Remedial Action (RD/RA) Work Plans and Supplemental Information Packages (SIPs) for the Remediation Units (RUs) that are part of the ROR Remedial Action[2] and the revised Final Design Plan and SIP for the UDF.[3] However, some of the activities described in this CEPP may not be applicable to each activity in view of

[1] This plan does not apply to the currently ongoing consolidation of debris from the demolition of the former Building 12 and 14 Complexes at the former GE Pittsfield facility in the foundations of Buildings 12, 12X, and 12Y – which was authorized under the CD and previously approved by EPA.

[2] The RUs that are part of the ROR Remedial Action were identified in GE's Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures (Anchor QEA 2022), approved by EPA on July 6, 2022. They correspond generally to the reaches of the ROR as designated by EPA.

[3] The UDF Final Design Plan was initially submitted to EPA in February 2024 and conditionally approved by EPA on September 12, 2024. In response to that conditional approval, GE will revise the UDF Final Design Plan and will submit the revised plan to EPA by December 20, 2024. The same is true for the UDF Operation, Monitoring, and Maintenance Plan.

the type, scope, and magnitude of the activities to be conducted and location-specific considerations. Therefore, the contents of this plan are subject to modification based on specific investigative or remedial activities, any location- or activity-specific considerations, and specific input provided by the contractors selected by GE to do the work. Any modifications will be presented in the RD/RA Work Plans or SIPs for the ROR RUs, in the revised UDF Final Design Plan or UDF SIP, or in other project-specific submittals, and will be subject to EPA review and approval.

The Site Health and Safety Plan (HASP), most recently submitted to EPA in July 2023 (Arcadis 2023), requires that each contractor used by GE develop, submit, and implement a contractor-specific HASP, as necessary. The Site HASP further requires that the contractor identify the activities to be undertaken in connection with remedial activities to be performed by the contractor and provide an assessment regarding health and safety requirements. Similarly, this CEPP requires that each such contractor prepare a contractor-specific contingency plan. At a minimum, the contractor's contingency plan will incorporate the procedures presented in this CEPP with any modifications and additional details as required by location- or activity-specific considerations. The contractor's contingency plan may be incorporated into the contractor's HASP, or it may be prepared as a separate document.

Section 2 of this revised CEPP describes the various roles and responsibilities of key personnel and support entities as related to implementation of this CEPP for the Site. Section 3 identifies emergency response equipment that will be available during implementation of the response actions at the Site. Section 4 describes work practices and general procedures that will be implemented to limit the potential for emergency situations. Section 5 presents procedures to be followed in the event of an emergency (including emergency reporting). Section 6 discusses post-emergency actions and reporting requirements.

As a supplement to this plan, Exhibit F-1 is GE's existing Integrated Emergency Response Plan, which details the emergency procedures that will be implemented if a fire, explosion, natural disaster, spill, or other unplanned release of hazardous waste/material to air, soil, surface water, or groundwater occurs within the boundary of the former GE Pittsfield facility (referred to in this plan as GE Facility). It delineates responsibilities and describes evacuation, cleanup, control, and containment methods to be used in an emergency. Exhibit F-2 includes telephone numbers for emergency personnel.

2 Contingency Plan Roles and Responsibilities

Given the potential range of response actions and potential emergency situations which may occur, the contents of this plan are necessarily general and subject to further definition (as needed) within the RD/RA Work Plan or SIP for each RU or other technical submittals for a given response action. Consistent with the general nature of this plan, the primary activities, roles, and responsibilities associated with this CEPP will be performed by GE and its contractor(s). However, in the course of an emergency response action, GE may enlist the services of one or more other organizations to assist in implementing this CEPP.

Implementation of this CEPP during the performance of response actions is the overall responsibility of GE and/or its representatives. The GE Project Manager for a given activity (or designated alternate) will be involved in all emergency measures that may be required for that activity. Assisting the GE Project Manager are three additional types of personnel: (1) Contractor Emergency Coordinators; (2) First Responders; and (3) GE Plant Security personnel (for the GE Facility only). The specific functions performed by GE and other support entities are described below. In addition to these key personnel and entities, any GE or contractor employees who observe or identify an emergency situation have certain duties, including noting relevant information regarding the emergency and making an initial notification, as described further in Section 5.1.

2.1 GE Project Manager

For each RU or other response action and for activities at the UDF area, GE will assign a Project Manager who will serve as the primary point of contact for all phases of the activity and the various response actions performed as part of that activity. In this role, the GE Project Manager will be involved in all emergency/contingency planning and in the response to any emergency measures that are taken.

The GE Project Manager must be familiar with (1) the layout of the area within which activities are being conducted; (2) the nature of the activities to be performed; (3) the location and characteristics of hazardous materials that are handled or encountered; (4) the location, type, and operation of fire control and spill control/cleanup equipment at each area; (5) the location of pertinent documents and records; and (6) available specialty emergency response capabilities (e.g., for hazardous materials spills, confined space rescue) of local municipal first responders.

In the event of a chemical release, fire, explosion, medical injury, or other emergency situation, the GE Project Manager will perform or assist others in performing the following activities:

- Gathering available information regarding the nature and extent of the emergency;
- Arranging for notification to and deployment of the response contractor (or other outside firm);
- Notifying other local agencies (e.g., police, hospital, Board of Health, etc.), as well as federal and state agencies, as needed;
- Coordinating temporary storage and disposal of any cleanup material;
- Assuring compatibility of stored cleanup material with other stored wastes;
- Generating written follow-up reports regarding the incident as required by various regulatory statutes applicable to the response action (a sample Emergency Response Report is provided as Appendix II of Exhibit F-1);
- Stopping operations and mitigating reoccurrence (e.g., requiring additional training, providing additional engineering controls or other corrective measures);

- Reviewing and approving or modifying proposed evacuation routes and assembly areas for on-site personnel at each area; and
- Performing periodic assessments of work area conditions and emergency readiness, including audits of available emergency equipment and documentation of changes in work area conditions that may warrant modification of the CEPP.

2.2 Contractor Emergency Coordinator

The performance of response actions at a given RU or other area (including the UDF area) will require one or more contractors. Unless otherwise directed by GE, each contractor will be responsible for developing and implementing a contractor-specific contingency plan and appointing a Contractor Emergency Coordinator.

The Contractor Emergency Coordinator will be responsible for implementing the contractor-specific contingency plan and for checking that the contractor employees take proper precautions to avoid emergencies. The Contractor Emergency Coordinator's routine responsibilities include the following:

- Establishment of evacuation routes and assembly areas for contractor personnel, which are subject to approval or modification by the GE Project Manager;
- Performance of periodic assessments of work area conditions and emergency readiness, including audits of available emergency equipment and documentation of changes in work area conditions that may warrant modification of the contractor's contingency plan; and
- Maintenance of communications with GE so that the contractor activities will not inhibit the ability of other on-site personnel to react to emergency situations.

In the event of a chemical release, fire, explosion, medical emergencies, or other emergency situation, the Contractor Emergency Coordinator will do the following:

- Provide the appropriate initial notifications (or verify that they have been made by other observers), depending on the location of the specific incident, as described in Section 5.1;
- Gather available information regarding the nature and extent of the emergency; and
- Perform additional duties as specified in the contractor's contingency plan, or as directed by the GE Project Manager.

2.3 First Responder

GE is obligated, under federal and state laws and the CD, to provide notice to various federal, state, and local government authorities of certain releases or threatened releases of oil or hazardous substances or materials. In the event that a spill, fire, or other incident leads to such a release or threatened release, the GE Project Manager, with assistance from the First Responder, will be responsible for providing the appropriate notice. Specifically, the First Responder will do the following:

- Gather information regarding the release;
- Assess the information received to evaluate if a reportable release has occurred; and
- Based on the above assessment, assist the GE Project Manager in notifying the appropriate authorities or organizations and in preparing any necessary written reports regarding the release.

A listing of GE's First Responders for overall activities is provided in Table 2 of Exhibit F-1. For each response action, the GE Project Manager may serve as the First Responder or GE may assign others to serve in this role.

2.4 GE Plant Security

GE Plant Security personnel are responsible for the initial coordination/communication of emergency situations within the GE Facility. In the event of an emergency at an area located within the GE Facility, GE Plant Security personnel, in consideration of the nature of the emergency, will do the following:

- Upon receipt of an emergency communication, document the information from that communication, along with other information gathered from monitoring radio communications, alarms, inspections, or other personnel, on the Plant Protection Emergency Response Report;
- As necessary, activate facility alarms if not already triggered;
- As necessary, contact the appropriate First Responder and the GE Project Manager; and
- As necessary, notify appropriate local emergency authorities (e.g., fire department, police department, or ambulance).

GE Plant Security personnel will respond and take actions as appropriate until the local emergency authorities arrive and assume incident command responsibility.

It should also be noted that, in the event of an emergency located outside of the GE Facility, including at the UDF area, GE Plant Security personnel, in consideration of the nature of the emergency, may also provide assistance to the First Responder and GE Project Manager.

3 Emergency Equipment

Emergency equipment, as required by applicable sections of 29 Code of Federal Regulations (CFR) 1910 and 29 CFR 1926, will be available prior to the commencement of project activities. This section describes the emergency equipment that may, depending on the specific activity, need to be present.

3.1 Communication Systems

The potential for an emergency situation exists during all phases of any response action conducted at the Site. Therefore, personnel involved in the activity shall have access to a telephone, two-way radio, or other emergency communication device.

GE Plant Security personnel carry two-way radios. Telephones are located within several occupied buildings and at GE Plant Security checkpoints within the GE Facility, and GE Plant Security personnel also carry mobile telephones. Mobile telephones and/or handheld radios will also be used for activities conducted at locations outside of the GE Facility, including along the ROR and at the UDF area. For such locations outside of the GE Facility, GE will conduct an evaluation of cell phone signal strength at each ROR RU, the UDF, or other remediation area to determine whether other communication methods need to be available for emergency notifications.

3.2 Fire-Fighting Equipment

Portable fire extinguishers of adequate size, class, number, and location as required by applicable sections of 29 CFR 1910 and 1926 will be present at all work locations. All extinguishers will be inspected monthly and undergo preventative maintenance on an annual basis.

For activities conducted within the GE Facility, additional fire-fighting equipment (i.e., wall-mounted, hand-held fire extinguishers, fire alarms, and automatic sprinkler systems) may be available at certain areas. All personnel will be familiar with the location and utility of any such supplemental fire-fighting equipment near the areas where activities are being performed.

Fire hydrants are located throughout the GE Facility and within or near other areas where investigative or remediation activities may be performed. To the extent that the areas around fire hydrants are under GE's control, those areas will be kept clear of equipment and debris to allow access to the hydrants to any responding authorities (e.g., the local fire department) in the event of an emergency. Any use of a fire hydrant for non-emergency-related activities (e.g., water supply for drilling activities or dust control operations) will be permitted only following approval of GE Plant Security (for activities within the GE Facility) or the local municipality (for activities outside of the GE Facility).

3.3 Spill Control Equipment

Spill control equipment and related materials must be available at work areas where the potential for a release of hazardous materials exists. Sorbent pads and other absorbent materials, plastic sheeting, brooms, and shovels will be immediately available in the event of a spill to contain and control released materials and to mitigate their spread. All sorbent materials used for the cleanup of spills will be containerized and labeled appropriately. Clean, empty containers will also be available for containment of spill debris and used cleanup materials.

3.4 Personal Protective Equipment

Personal protective equipment (PPE) is required to safeguard personnel in emergency situations from various hazards. PPE, such as hard hats, gloves, boots, coveralls, polyethylene-coated Tyvek® suits, safety glasses or goggles, and face shields, will be worn or easily available, as needed, depending on the degree of physical or chemical hazards present at each area and the type of activity being performed. Additional PPE, such as an eye wash bottle, should be available nearby and easily accessible for workers that may use or encounter liquid chemicals that have the potential to splash into and damage the eye. The various levels of protection and the conditions of use for each level are discussed generally in the Site HASP and will be established in the contractor's HASP.

4 Preventative Procedures

All investigative and remediation activities will be performed in a manner designed to minimize the possibility of any threat to on-site workers, the public, or the environment. The following sections list procedures to be followed in order to minimize the potential for work-related injuries, accidents, or other emergency situations.

4.1 Pre-Construction Emergency Planning

Planning for possible emergency situations will be completed by the contractors prior to mobilization and initiation of each remediation or other construction activity. These measures will include evaluating potential emergency situations, coordinating with local emergency responders for each affected municipality, compiling adequate supplies and manpower for responding to an emergency, and completing emergency training for site personnel. Additionally, GE and its contractors will coordinate and plan emergency response drills and/or mock situations to be conducted during the implementation of the remediation/construction activity, if requested by local municipalities. These drills will be used to support any pre-construction emergency response training providing site personnel with experience putting the emergency responses into action. The emergency response drills will be conducted in coordination and cooperation with local emergency responders.

4.2 Safe Working Practices

To minimize the potential for accidents, injuries, and dangerous situations, as well as to minimize the potential for emergency situations, standard safe working practices will be identified and adopted by the contractor. Prior to engaging in on-site activities, all contractor personnel must attend a safety meeting before entering the Site and review the Site HASP and this CEPP, as well as any other appropriate contractor-specific health and safety and contingency plans. All work area personnel have the following responsibilities pertaining to work area activities:

- Take all reasonable precautions to mitigate injury to themselves and co-workers;
- Implement the requirements of the Site HASP and other applicable contractor-specific HASPs;
- Perform only those tasks that can be performed safely; and
- Immediately report any accidents, unsafe conditions, near misses, and/or other incidents as set forth in the Site HASP.

4.3 Hazard Assessments and Work Site Audits

Periodic work area hazard assessments and audits may be conducted by the GE Project Manager, the Contractor Emergency Coordinator, or other individuals. Modifications to contractor-specific safety programs may be made based on the results of the hazard assessments or work site audits.

The purpose of work area hazard assessments is to provide continuing recognition and analysis of potential safety hazards. Because of the changing nature of field projects, supervisors must continually inspect the work area to identify hazards that may affect personnel, the community, or the environment. Items typically evaluated during a work area hazard assessment include, but are not limited to the following:

- Availability of required PPE (including protective clothing);
- Adequacy of safety-related monitoring;

- Evaluation of potential hazards relating to the tasks being performed;
- Maintenance of first aid supplies and emergency response equipment; and
- Compliance with hot work permits and lockout/tag out procedures.

Work site audits will be performed to check that personnel have received the appropriate training and are performing their duties in the safest manner possible and in compliance with the applicable safety requirements. Issues which arise from work site audits will be conveyed to the appropriate personnel who will identify and implement corrective actions.

4.4 Unanticipated Working Conditions

During the performance of investigative or remediation activities, conditions may be encountered that are not anticipated based on previously available information. These conditions may include, but are not limited to, observations of the following:

- Non-aqueous phase liquid;
- Intact buried drums or capacitors;
- Unmarked underground utilities; or
- Vapor emissions.

If unanticipated conditions are encountered, work will stop, the location will be secured and isolated to the extent practicable and appropriate for the situation, and the GE Project Manager will be contacted for instructions.

4.5 Evacuation Plan

Each contractor must establish an evacuation plan as part of its contractor-specific HASP or contingency plan. This plan must specify the alarm system(s) that will be used to call for an evacuation of the contractor's work area and provide evacuation routes and assembly areas for workers leaving the area. All personnel entering a work area will be informed of the evacuation route and the assembly area. Evacuation routes will be planned to extend through the Contamination Reduction Zone (as defined in the Site HASP) in order to decontaminate personnel evacuating from the Exclusion Zone (if time permits) and to obtain a preliminary accounting of personnel. Alternate evacuation routes will be established in the event that the primary route is blocked by fire or spill or is otherwise impassable.[4] Evacuation from the UDF area will be addressed in the upcoming revised UDF Operation, Monitoring, and Maintenance Plan.

Assembly areas will be located upwind of the work area, based on predominant wind directions. Ideally, all workers, regardless of affiliation, will assemble in the same general area if evacuation is necessary. However, this may not be feasible in certain areas based on the size of the area and the activities being conducted at a given time. If the contingency plans of multiple contractors working in an area or adjacent areas propose differing assembly areas, the GE Project Manager will attempt to identify a common assembly area for all workers, to the extent practicable and appropriate.

[4] GE has established suggested evacuation routes and assembly areas for its employees working within occupied buildings at the GE Facility (see Appendix I of Exhibit F-1). These previously designated assembly areas will be considered in the planning of evacuation procedures during response actions performed at the GE Facility.

5 Emergency Procedures

All activities will be performed in a manner that minimizes the potential for an emergency situation to arise, or if such a situation arises, to minimize its magnitude. However, during the performance of the various investigative and remediation activities, the potential exists for the unplanned sudden or non-sudden release of hazardous materials to air, soil, or surface water, as well as the possibility of fire or explosion. If such an emergency situation arises, countermeasures will be implemented quickly and in a manner that will protect the safety of workers and emergency response personnel and will mitigate potential adverse impacts to the public and the environment.

Every emergency is a unique event that must be dealt with by trained personnel working in a calm, controlled manner. In the event of an incident, the prime consideration is to provide the appropriate initial response without placing additional personnel at unnecessary risk.

Section 5.1 provides general instructions for making the necessary notifications and initiating response activities following the identification of an emergency. Exhibit F-2 contains a list of phone numbers that may be used to contact federal, state, and local authorities and/or response contractors to report or respond to an incident. Contingency measures for spills and discharges from materials handling or transportation, or otherwise occurring during the course of performing the activities, are discussed in Section 5.2.

For other types of emergencies, if they occur at the GE Facility, response actions will be taken in accordance with the procedures described in GE's Integrated Emergency Response Plan (Exhibit F-1). For such types of emergencies occurring at locations outside the GE Facility, including at the UDF area, the appropriate response actions will be described in the contractor-specific contingency plans.

5.1 Initial Notifications

Upon identification of an emergency situation, several notification and response activities will be performed by the entities identified in Section 2 of this CEPP, including GE, GE's representatives, the Contractor Emergency Coordinator, First Responder, and GE Plant Security personnel (if applicable). This section of the CEPP describes the general notification procedures that will be followed in response to the identification of an emergency situation. These procedures are organized into two categories: those emergencies that may occur within the GE Facility (Section 5.1.1) and those emergencies that may occur at the Site in areas outside the GE Facility, including the ROR and the UDF area (Section 5.1.2). In addition, for both categories of emergencies, Section 5.1.3 provides additional information on the reporting required under the CD.

For the most part, it is anticipated that any emergency situation will be first identified by a person who is involved in the performance of the work activity (e.g., a GE or contractor employee). That observer will, to the extent that he or she can do so safely, identify the emergency by surveying the incident and noting the information below, if possible:

- Type of emergency (fire, spill, explosion, etc.);
- Location (city/town, building, roadway, river stationing, etc.) and migration potential;
- Source of emergency (breach of underground utility line, equipment malfunction, slope failure, etc.);
- Material identification (visual appearance, odors, etc.); and
- Impact of emergency (persons injured, extent of spill, etc.).

In the event of a spill, release, fire, explosion, medical emergency, or other emergency situation, the observer will provide initial notifications as described below in Sections 5.1.1 and 5.1.2.

It may also be possible that an emergency situation is first identified by persons other than those directly involved in the work activity, such as a property owner or other public entity. The first observer of an emergency situation—regardless of whether that person is involved with the specific work activity or is a member of the general public—will be the first to gather information regarding the type and nature of the situation and will also likely be involved in the first communications regarding the emergency. In this case, upon learning of the emergency situation, the Contractor Emergency Coordinator or GE Project Manager will check that the initial notifications described below have been made. If possible, the Contractor Emergency Coordinator or GE Project Manager will also contact the observer of the incident to gather relevant information concerning the type of emergency and any initial response actions undertaken.

5.1.1 Within the GE Facility

Emergency situations that occur within the GE Facility will be responded to in the following manner:

1. The first observer of the emergency will immediately contact GE Plant Security personnel. The emergency telephone numbers for GE Plant Security personnel are as follows:
    a. 413-553-6666 for any emergency; and
    b. 413-553-6625 for general or other non-emergency communications.
2. GE Plant Security personnel will coordinate the subsequent emergency response actions and will contact the First Responder and GE Project Manager, as necessary.
3. The First Responder and GE Project Manager may contact other outside emergency response contractors and will coordinate subsequent notification actions regarding the incident, as required by applicable laws and regulations, as well as the CD. Depending on the specific incident, such reporting may be required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Section 103), the Emergency Planning and Community Right-to-Know Act (EPCRA) (Section 304), the Clean Water Act (Section 311), the Toxic Substances Control Act, the EPA regulations under those statutes, Massachusetts General Law Chapter 21E, the Massachusetts Contingency Plan, and/or the CD for the Site. Such reporting may include notification to some or all of the following entities (phone numbers provided in Appendix II of Exhibit F-1 and in Exhibit F-2):
    a. Pittsfield Local Emergency Planning Committee (this is the same contact as the fire department but may have to be notified separately as a discrete notification);
    b. MassDEP;
    c. State Emergency Response Commission (this is the same contact as the MassDEP but may have to be notified separately as a discrete notification);
    d. National Response Center;
    e. EPA New England Region;
    f. EPA Project Coordinator or appropriate EPA Project Manager under the CD; and
    g. MassDEP Project Coordinator under the CD.
4. The First Responder will also assist the GE Project Manager in preparing a written report regarding the incident. A Spill Report Form is included as Appendix III of Exhibit F-1.

5.1.2 Outside of the GE Facility

Emergency situations that occur at the Site but outside of the GE Facility, including in the ROR and at the UDF area, will be responded to in the following manner:

1. The first observer of the emergency will call 911 and then the GE Project Manager and Contractor Emergency Coordinator (if different from the observer) for the specific area within which the incident has occurred.
2. The GE Project Manager will coordinate with the First Responder and/or Contractor Emergency Coordinator regarding the reporting of the incident to the other authorities. Depending on the specific incident, such reporting may be required under some or all of the laws and regulations (and CD) identified in Section 5.1.1 above and may require notification to some or all of the entities listed in that section.
3. The GE Project Manager will notify the EPA Project Coordinator or the appropriate EPA Project Manager, or if neither is available, the Emergency Response Section in the New England Region.
4. The First Responder and/or Contractor Emergency Coordinator will assist the GE Project Manager in preparing a written report regarding the incident. The Spill Report Form to be used will be the same as that included in Appendix III of Exhibit F-1.

5.1.3 Notifications Under Consent Decree

As noted above, the notification/reporting that must be made in the event of an emergency or other release of hazardous substances or materials may include notifications under a variety of laws and regulations, including CERCLA, EPCRA, the Clean Water Act, Toxic Substances Control Act, Chapter 21E, and/or the Massachusetts Contingency Plan. In addition, the CD for the Site establishes certain specific notification requirements for emergencies and certain other releases of hazardous substances. Those requirements are summarized below.

As required by Paragraph 90 of the CD, if any event occurs during the performance of any response action that causes or threatens a release of waste material that “constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment” (as defined in Paragraph 90), GE will immediately notify the EPA Project Coordinator (or if not available, the appropriate EPA Project Manager, or if neither is available, the Emergency Response Section in the New England Region) and the MassDEP Project Coordinator. The requirements for further response actions to prevent, abate, or minimize such a release or threat of release constituting an emergency are set forth in Paragraphs 91-92 of the CD.

In addition, as required by Paragraph 69 of the CD, if any event occurs during the performance of any response action that involves a reportable release under Section 103 of CERCLA or Section 304 of EPCRA – which require reporting of any release of a hazardous substance in excess of a reportable quantity – GE will notify EPA and MassDEP (same contacts as noted above for emergencies). Such an event will be reported within 24 hours of the onset of the event or immediately upon obtaining knowledge of the event, whichever is later.

Other notification requirements may be specified in the RD/RA submittals for a particular RU or other response action. These notifications will be made by the GE Project Manager, with assistance provided by the First Responder, as appropriate.

5.2 Spill Response Procedures

In the event that a spill or other discharge of hazardous materials occurs during performance of a response action, the notification procedures described in Section 5.1 above will be implemented. In addition, depending on the

location of the spill/release (i.e., within or outside of the GE Facility), initial measures taken in response to the spill will be implemented. This section describes the general activities that will be taken in response to a spill event. The information presented herein is general and intended to be supplemented by the information contained in Appendix II of Exhibit F-1 (for spills that occur within the GE Facility) and by information developed by the Remediation Contractor and contained in the contractor-specific contingency plan (for spills that occur either within or outside the GE Facility).

In general, the techniques used for hazardous waste spill containment and cleanup will vary with the location, type of spill, and the materials spilled. Vehicular traffic and personnel must be alerted and diverted from the area until responding authorities arrive on the scene. If possible, the source of the spill should be secured and actions should be taken to contain the spill. Only persons with appropriate training will perform these initial response actions, and only when it will not endanger others. Protective equipment must be worn, as required, when attempting such actions. The availability of emergency equipment for spill cleanup is discussed in Section 3.3.

The methods used for spill response will depend on the type of material spilled, the extent of the spill, and the type of area at which the spill occurred. In the event that a container becomes damaged, material will be transferred from the container as soon as practical. Ruptured hose or pipe sections will be isolated by closing valves between the rupture and the material source(s). In the event of a spill outdoors, nearby drains and catch basins will be covered with plastic sheeting and surrounded with absorbent material to mitigate the entering of material. If spilled material reaches an open waterway, booms will be placed downstream so that further migration of the released material does not occur. Following containment of a spill or release, the released material will be cleaned up with absorbents and placed into other containers for proper disposal.

During construction of the UDF, the contractor constructing the UDF will be responsible for controlling spills and implementing the above spill response procedures. Similarly, during UDF operations, the contractor responsible for such operations will manage potential spill sources, including transport and delivery of consolidation material, placement of such material, and leachate transfer and load-out, and will be responsible for implementing the above spill response procedures for any spills that occur at the UDF property.

For spills that occur during transportation at the Site (i.e., on-site transport by truck or rail, including transport to the UDF) or spills that occur during transportation from the Site (i.e., transport of removed materials to an off-site facility by truck or rail), the transporter has the responsibility to manage a spill or accident. The transporter may be retained directly by GE or by GE's Remediation Contractor. The transporter must have an emergency/contingency plan in place prior to commencing work. In the event of an incident, the transporter will call the following in order:

- 911;
- The emergency response number on the manifest; and
- The dispatcher for the transportation company who will then notify the GE Project Manager (if not already notified directly by the transporter).

Local authorities will respond to the 911 call to secure the area and the local emergency response team should be on-site in two hours or less.

For spills that occur during on-site transport, the GE Project Manager will confirm that the transporter is carrying out the appropriate response activities in accordance with the emergency/contingency plan and will perform the appropriate notifications in accordance with the procedures specified in Section 5.1. If such on-site spills occur during the course of construction activities (e.g., construction or operation of the UDF, sediment or soil removal), GE's remediation contractor will support the transporter in implementing spill response procedures. Once the material is contained, the material will be managed as directed by or in coordination with GE.

For spills that occur during off-site transport of removed materials, once the materials have left the Site, the transport activities, including spill response procedures, will be subject to applicable federal, state, and local laws and regulations, including notification requirements, compliance with which will be the responsibility of the transporter. However, once the transporter notifies the GE Project Manager of the spill, the GE Project Manager will notify the EPA Project Coordinator or the appropriate EPA Project Manager (or, if neither is available, the Emergency Response Section in the New England Region) and, if the spill occurs in Massachusetts, the MassDEP Project Coordinator. Depending on the location of the spill and the applicable laws and regulations, once the material is contained, the material will be managed in coordination with GE.

Additional or alternate spill response procedures may be specified in the RD/RA submittals for a particular RU or other response action or in the UDF Final Design Plan.

6 Post-Emergency Action

Following an emergency, the GE Project Manager will perform all appropriate written and verbal follow-up activities. Depending on the applicable reporting and regulatory requirements, the GE Project Manager will gather and summarize in writing, if necessary, the information to be provided to the appropriate agencies. The following sections summarize post-emergency actions to be conducted.

6.1 Follow-up to Reportable Releases

As noted above, certain releases of hazardous substances or materials must be reported verbally to various federal, state, and local agencies under applicable laws and regulations. To the extent that these laws and regulations require written follow-up reports, such reports will be made. In addition, as required by Paragraph 70 of the CD, following the initial notification under Paragraph 69 of a release of a hazardous substance in excess of its reportable quantity, GE will submit a written report to EPA and MassDEP within 20 days after the onset of the event. The report will set forth the events that occurred and the measures taken or to be taken in response. A further written report will be submitted within 30 days of the conclusion of the event, setting forth all action taken in response to the event.

6.2 OSHA Notification

In the event that injuries or fatalities or any incident resulting in lost time occur during the emergency at the GE work area, the Occupational Safety and Health Administration (OSHA) must be notified. The threshold reporting requirements are one fatality or three employees taken to the hospital for examination, observation, or treatment. Pursuant to 29 CFR § 1904.8, notification must be made within eight hours of obtaining the information regarding the employees involved in the emergency.

Verbal notification will be made to the following:

U.S. Department of Labor—OSHA Region 1
133 Portland Street, 1st Floor
Boston, MA 02114
Tel. (617) 565-7164

OSHA, depending on the circumstances of the emergency, may also request a written follow-up report and other documentation. OSHA reserves the right to conduct an investigation of the causes of any reported injury or fatality.

7 References

Anchor QEA (Anchor QEA, LLC). 2022. Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures. Prepared for General Electric Company, Pittsfield, Massachusetts. July 5.

Arcadis (Arcadis U.S., Inc.). 2013. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised July.

Arcadis. 2023. Site Health and Safety Plan – GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised July 17.

Arcadis. 2024. Project Operations Plan. Prepared for General Electric Company, Pittsfield, Massachusetts. Revised January 25.

EPA (U.S. Environmental Protection Agency). 2020. Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River. December 16.

EPA and GE (General Electric Company). 2000. Consent Decree in *United States of America, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company*. Civil Action Nos 99-30225, 99-30226, 99-30227-MAP, entered by the United States District Court for the District of Massachusetts. October 27.

Exhibit F-1 – GE Integrated Emergency Response Plan

RECORD OF CHANGES		
Revision	**Date**	**Description**
0	5/6/1997	Initial Issuance
1	2/10/2006	Updated Contact Information for key personnel
2	3/30/2007	Updated Contact Information, phone numbers
3	06/20/2013	Updated Contact Information for key personnel, reformatted
4	01/25/2024	Updated Plan Content and Contact Information
5	11/22/2024	Updated Contact Information

Tables

Appendices

1. Purpose

The General Electric (GE) Integrated Emergency Response Plan details the emergency procedures that will be implemented if fire; explosion; natural disaster; spill or other unplanned release of hazardous waste/ material to air, soil, surface water or ground water occurs. This plan delineates responsibilities and describes evacuation, cleanup, control and containment methods to be used in an emergency. This plan is written to comply with the following: Occupational Safety and Health Administration (OSHA) regulations in 29 CFR 1910.38; Resource Conservation and Recovery Act (RCRA) regulations in 40 CFR Part 264 Subpart D, 40 CFR Part 265 Subpart D, and 40 CFR 279.52; oil pollution prevention regulations, including spill prevention, control, and countermeasure plan requirements, in 40 CFR Part 112; and Clean Air Act chemical accident prevention regulations in 40 CFR Part 68.

2. Scope

This Integrated Emergency Response Program (the "program,") applies to GE employees and contractors working at the GE Pittsfield facility. This facility is not an uncontrolled hazardous waste site. Employees working at the GE facility are not allowed to assist in handling emergencies described under OSHA regulations in 29 CFR 1910.120. Outside HAZMAT contractors respond to such emergencies. Employees make notification to GE Plant Security in case of an emergency and then they evacuate if necessary.

3. References

- OSHA regulations in 29 CFR 1910.120, 1910.38
- RCRA regulations in 40 CFR Part 264 Subpart D, 40 CFR Part 265 Subpart D, and 40 CFR 279.52
- Oil pollution prevention regulations, including spill prevention, control, and countermeasure plan requirements, in 40 CFR Part 112
- Clean Air Act chemical accident prevention regulations 40 CFR Part 68.
- Related GE Health and Safety Programs and Procedures
    - Confined Space Entry
    - Medical Surveillance
    - Respiratory Protection
    - PPE Program
    - LOTO
    - Excavation Protocol

4. Responsibilities

4.1 GE Facility Manager

The GE Facility Manager is responsible for:

- Implementing this program by assigning the various functions described in this program to competent individuals within the facility; and

- Ensuring that employees are informed of their rights and responsibilities under this program, and that the proper training is provided to all affected employees (29 CFR 1910.38 (a)(2)(vi)).

4.2 GE Project Manager

The GE Project Manager is responsible for ensuring that all employees at the facility are informed of their rights and responsibilities under this program, and providing the proper training to all affected employees (29 CFR 1910.38 (a)(2)(vi)).

- Managing and enforcing this Emergency Response Program;

- Analyzing the work site to identify existing and potential hazards of working with hazardous substances/waste;

- Implementing hazard prevention/control and safety/health training; and

- Evaluating the effectiveness of this program and updating the program as needed (see 29 CFR 1910.38 (a)(2)(vi)).

4.3 Designated Contractor Representative

The Designated Contractor Representative is responsible for:

- Informing contractors of this program while they are working at the GE facility;

- Ensuring that all contractors understand their role related to emergencies, fires, evacuation, spills and natural disasters (see 29 CFR 1910.38 (a)(2)(vi)); and

- Ensuring that all relevant environmental health and safety regulations are being followed by contractors while work is being performed.

4.4 Contractor

Any contractor that performs work at the facility is responsible for:

- Providing health and safety related information to the GE Designated Contractor Representative;

- Ensuring that all contractor employees have the training required to perform work at the GE Pittsfield facility;

- Investigating all contractor employee injuries, illnesses and accidents and reporting results to the Designated Contractor Representative;

- Ensuring that all relevant environmental, health and safety regulations are enforced and followed by the contractor's employees; and

- Having a written program that covers procedures for emergencies and evacuations for its employees while working at the GE facility. This program will be reviewed with the Designated Contractor Representative to assure that it conforms to the procedures in this Integrated Emergency Response Program.

4.5 Employees

Employees are responsible for following the procedures required by this program.

4.6 Emergency Coordinator

The duties of the Emergency Coordinator, as defined by 40 CFR 264.55 and 264.56, will be performed by the three closely linked individuals or entities listed in Sections 4.7, 4.8, and 4.9.

4.7 First Responder

The First Responder, who will be a GE employee, is responsible for:

- Gathering information regarding a spill (see 40 CFR 264.56(b));

- Relaying information to management if a possible hazard to human health or the environment exists (see 40 CFR 264.56(c));

- Contacting appropriate state and federal agencies regarding a release if warranted (see 40 CFR 264.56(d));

- Assisting management with the generation of written notifications and reports (see 40 CFR 264.56(j));

- Notifying appropriate state or local emergency agencies (e.g., fire department, police department, ambulance, county HAZMAT team) (see 40 CFR 264.56(a)(2)); and

- Notifying response contractors to clean up spills if necessary.

4.8 GE Plant Security

GE Plant Security is responsible for:

- Gathering information on the reported spill (see 40 CFR 264.56(b));
- Activating facility alarms as necessary (40 CFR 264.56(a)(1));
- Verifying all individuals in a work area are safely evacuated to a designated assembly area, by performing a role call;
- Notifying the First Responder if necessary; and
- Generating written a report of an incident.

4.9 Response Contractor

The response contractor is responsible for taking appropriate response measures to contain, isolate and clean up spilled materials (see 40 CFR 264.56(e) and 40 CFR 264.56(g)).

5. Employee Response Procedures

5.1 Threat of Fire

In the event that a threat of fire is observed, the observer should immediately contact GE Plant Security (413-553-6666). The threat, potential hazard, and any actions taken up to that time should be described as part of this notification.

5.2 Fire in Progress

Any employee discovering a fire will immediately evacuate the area and will use the nearest safe telephone or two-way radio to contact GE Plant Security (413-553-6666) and explain that there is a fire in progress. The employee should describe the type of fire involved (e.g., “chemical fire” and its location).

5.3 Spill Emergencies

In the event of a spill, the observer should:

- Evacuate the area immediately;
- Notify GE Plant Security (413-553-6666); and
- To the extent that they can do so safely away from the incident, identify the emergency by surveying the incident and noting the information below if available:

- Type of emergency (fire, spill, explosion, etc.);
- Location (building, tank farm, confined area, migration potential, etc.);
- Source of emergency (tank, drum, etc.);
- Material Identification (visual appearance, scents, etc.);
- Impact of emergency (personnel injured, extent of spill, etc.); and
- Approximate quantity spilled (gallons or pounds).

5.4 Medical Emergencies

All medical emergencies should be directed to GE Plant Security at 413-553-6666.

Employee making notification should give the location and type of medical emergency if known.

5.5 Non-Emergency

Follow up information – calls to GE Plant Security should be directed to 413-553-6625.

6. Evacuation

6.1 Alarm Systems

When alarm systems are triggered, personnel must immediately evacuate the area in an orderly fashion and proceed to the designated primary or secondary assembly areas (see Appendix I). Suggested evacuation routes are posted throughout the occupied areas of the facility. Employees are required to make themselves aware of the evacuation exits from the building in which they work. Employees will remain at the assembly area until GE Plant Security takes a roll call. Employees are not allowed to re-enter the evacuated area until GE Plant Security has designated it safe. Employees working in unoccupied buildings will evacuate the area where they are working by the nearest safe exit. They will then notify GE Plant Security by radio or other means of their location and wait there until they arrive.

6.2 Incident Commander Designation

The Pittsfield Fire Department will assume the role of incident commander for all situations involving major fires, major chemical spills, or explosions. The fire department will control the situation and determine alternate evacuation procedures, assembly areas, and accountability for employees, if Section 6.0 of this program is determined to be insufficient to assure employee health and safety.

7. GE Plant Security – General Response Procedure

Upon receipt of an emergency call, GE Plant Security personnel will perform the following:

- Document the receipt of the call with information received and recorded on the GE Plant Security Emergency Response Report (see Appendix II);

- Coordinate the response to an emergency by contacting (as needed) the fire department, ambulance, police department, and First Responder;

- If notified of a fire, explosion or major spill, immediately activate the area building alarm systems; and

- Send a GE Plant Security patrol person to the facility to verify that all personnel have been safely evacuated to the designated assembly areas.

8. First Responder Response/Report Procedures

First Responders, who are GE employees, have the general responsibility of notifying federal, state and local government agencies concerning releases. Table 1 lists the First Responders (and their phone numbers) assigned to report spills to government agencies. The following agencies/organizations may need to be notified if there is a release at the facility, depending on the notification requirements of the Consent Decree for the GE-Pittsfield/Housatonic River Site and applicable laws and regulations:

- Pittsfield Local Emergency Planning Committee (LEPC) (same as fire department but must be reported as a discrete notification);

- Massachusetts Department of Environmental Protection (MassDEP);

- State Emergency Response Commission (SERC) (same contact as MassDEP but must be reported as a discrete notification);

- National Response Center;

- U.S. Department of Transportation (DOT) (via National Response Center if the emergency event occurred on a public road and meets DOT incident criteria);

- EPA Region I – PCB Coordinator (if PCB laden material/liquids is involved); and/or

- GE Management.

The First Responders will also assist management with written reports to agencies.

All pertinent emergency response information and monitoring data are entered on the First Responder Spill Report form (see Appendix III) and filed with the GE Facility Manager. This report is used as a reference document when reporting to government agencies.

9. Management Response Procedures (GE Facility Manager)

In the event of a release, the GE Facility Manager will:

- Assist in assessing public hazards to human health and the environment;
- Have the authority to stop operations and prevent reoccurrence (e.g., training, engineering controls);
- Arrange for cleanup, storage and disposal of released material;
- Assure compatibility of waste; and
- Write follow-up reports regarding the incident for agency submittals.

10. Specific Emergency Response Procedures (to be used by Trained Emergency Response Personnel)

10.1 Spill Designation

For purposes of this document, a major spill is considered to be a release of hazardous materials in quantities greater than five gallons or a release of any amount of those hazardous materials immediately dangerous to human health or the environment. Employees are not allowed to clean up major spills, spills less than five gallons which have the potential to involve larger quantities of materials, or spills less than five gallons involving acids, caustics, or materials immediately dangerous to human health and the environment.

10.2 Spill and Leak Procedures

If there is a spill or leak of hazardous material, the observer should immediately notify GE Plant Security at 413-553-6666. No attempt should be made to mitigate the spill unless it can be done safely. The techniques used for hazardous waste material spill containment and cleanup will vary with the location, type of spill or leak, and the amount of material involved. On-site emergency response contractors will respond to all spills. They are notified through GE Plant Security. Whenever possible, the source of the spill or leak should be secured and contained. These initial response actions will be performed only when they will not endanger the employee and the potential for the initial spill to evolve into a large spill (> five gallons) does not exist. In the event that a spilled material cannot be identified by visual observation, the material will be collected by a trained emergency response person, and containerized in either a drum or tanker truck depending on the quantity spilled. A sample of the material will be analyzed to determine its identity. Response procedures for specific types of spills and leaks are outlined below. These procedures are to be used only by trained emergency response personnel:

10.3 Ruptured Hose or Pipe

The ruptured section of hose/pipe will be isolated by closing valves between the rupture and the material source.

In the case of a small leak from a low pressure line, cloth or tape will be wrapped around the hose/pipe to slow or stop the leak until the material source is isolated from the leak and/or the leak is repaired.

In the case of a small leak, a drip pan will be used to collect the leaking material until the source is isolated from the leak and/or the leak is repaired.

10.4 Large Spill or Leak from Ruptured Hose or Pipe

The ruptured section will be isolated and the spilled material contained with absorbent pads, booms or clay absorbent by building a containment dike around the spill.

10.5 Spills Near Drains, Catch Basins or Open Waterways

Nearby drains and catch basins will be surrounded with absorbent material to prevent material from entering the drainage system.

In the event that an oil release reaches a catch basin which leads to an oil/water separator, the oil will be removed from the separator by a collection belt.

If the release reaches an open waterway, booms will be placed downstream to prevent further migration of released material.

10.6 Spills within Diked Areas

Spills within diked areas will be removed at the earliest practical time. When it is safe to do so, the liquid spilled material will be cleaned up using proper spill response procedures. Large quantities of material will be transferred to a tanker truck for proper disposal. Material residue will be cleaned up and drummed using absorbent pads or clay absorbent.

10.7 Leaking Drums

In the event that a drum is damaged, material will be transferred out of the damaged drum when practical or the drum is placed in an overpack drum. Spilled material will be cleaned up with absorbent and placed in another drum.

10.8 Spills of PCB Containing Materials

All spills involving PCBs at concentrations greater than 50 ppm will be cleaned up according to EPA's PCB spill cleanup policy under the Toxic Substances Control Act (TSCA) (40 CFR Part 761 Subpart G).

10.9 Leaking Tank Spills

When a tank is discovered leaking, steps will be immediately taken to control the source of the leak and contain the released material only if an employee can do so safely. These actions are limited to turning off a valve or other immediate control action.

If the leaking tank contains hazardous material, the response contractor will perform the transfer of liquid from the tank to another hazardous material storage container.

The tank will be repaired and integrity tested before reuse. If the damage is determined to be excessive, the tank will be replaced or taken out of service.

10.10 Atmospheric Release Response

The potential airborne hazards associated with a spill or fire depend on several factors including such as wind speed, direction, air, temperature, and cloud cover, as well as the volume of material spilled, its toxicity, its volatility, and its flammability. Each of these factors will be considered when the fire department determines the type of response and the need for evacuation (see 29 CFR 1910.38 (a)(4)). The Pittsfield Fire Department will establish an Incident Command in charge of the release or fire. GE personnel will assist the fire department with information relative to the incident. Employees will normally evacuate the area.

10.11 Hurricanes and Tornadoes

Pittsfield is situated approximately 120 miles inland from the Atlantic coast. Hurricanes occasionally have an impact on this area with serious wind and rain conditions. However, due to Pittsfield's inland location and hilly terrain, hurricane and tornado warning systems usually provide adequate notice of impending storms through commercial radio and television transmissions (see 29 CFR 1910.38 (a)(4)). Equipment shutdowns and other necessary precautions will be implemented as necessary.

10.12 Floods

Heavy rainfall can result in increased water level in the Housatonic River, flooding areas of the plant near the river. Potential flooding is typically known in advance and allows adequate time to implement procedures designed to minimize the effect of flooding at the facility. Section 10.13 of this plan contains specific flood response procedures for Bldgs. 64W, 64X, 64V, and 64S.

10.13 Flood Response Plan for Bldgs. 64W, 64X, 64V, 64S

The following procedures will be followed at each location in the event of imminent flooding. The responsible party will take the following actions prior to the Housatonic River's East Branch flooding into the facility. These procedures are to be followed only if they will not endanger the safety of employees.

- STAGE I: Staff gage at 64X reads 5.0(EL977) and source (snow melt /rainfall) forecast to continue:

    - Contact the Groundwater Treatment Plant operators to arrange for vehicles and operators to move the 1000-gallon trailers to Bldgs. 64W, 64X, 64V, and 64S in that order.

    - At each building, disable the well pumps that feed the holding tanks.

- For the electrical pumps, *shut off the power that feeds the well pumps*.

- For the air pumps, shut off the power to the air *compressor that runs the well pumps and isolate the pump from the source of compressed air.*

- Properly position the 1000-gallon trailers and pump all free liquid from the oil/water separator tanks and caissons into the trailers.

- Remove all drums and containers related to the recovery systems and move them to GE's Bldg 78 Waste Storage Facility

- *Do not put more than 500 gallons of pumped material in the 1000 gallon tanker.*

- *Close all valves.*

- Unload the trailers at Bldg. 64 tank farm.

- When pumping is completed, relocate the empty trailers to the cement pad east of Bldg. 64

- STAGE II: Staff gage at 64X reads 7.0 (EL979):

    - Disable all power to the affected areas.

10.14 Earthquakes

The probability of earth tremors causing damage in Pittsfield is slight. Emergency shutdowns and isolation of storage tanks can minimize the effects of any aftershocks. Plant personnel are trained to take action for these situations. The actions taken will vary with each situation.

10.15 Utility Failure

The facility uses several utilities including water and electricity. The loss of any of these utilities may result in an emergency. Plant design compensates for many of these failures through automatic shutdowns and/or alarms. Personnel are trained to take corrective action for utility related emergencies depending on the situation.

10.16 Medical Emergencies

During a medical emergency, certified and trained personnel are responsible for administering first aid at the scene of the emergency and evaluating the need for an ambulance. Any person discovering a medical emergency should immediately call 413-553-6666. No attempt should be made to move a person with potential neck or back injuries except to remove that person from a life-threatening situation.

10.17 Rescue Procedures

All rescue duties will be performed by the Pittsfield Fire Department.

All medical duties will be performed by the Berkshire or County Ambulance Service (29 CFR1910 (a)(2)(iv)).

11. Post Emergency Actions

Once the emergency is over, GE management will direct the appropriate cleanup actions. Based on the assessment of the type(s) of material spilled, management will structure and supervise the response procedures to ensure that the site is secure and all wastes are properly cleaned up, segregated, containerized and labeled.

Free liquid waste will be cleaned up using portable pumps or other equipment. Residues will be cleaned up using absorbent pads or clay absorbent and containerized to facilitate material disposal.

All visibly contaminated soil will be cleaned up and containerized under the direction of management personnel. All disposable personal protective equipment and cleanup debris, such as absorbent pads and booms, will be removed and containerized. PCB-contaminated surfaces will be cleaned according to EPA's TSCA PCB spill cleanup policy (40 CFR Part 761 Subpart G).

Once the cleanup operation has been completed, all containerized waste and cleanup debris will be labeled and moved to an appropriate waste storage area at the facility.

If a release to the environment occurred, a determination of whether waste or soil samples need to be taken and analyzed will be made. If spilled hazardous waste reached a storm drain, monitoring will be required at appropriate plant discharge points to assess the environmental impact.

If it is determined that further cleanup is necessary, the site will, if possible, remain off limits to facility personnel until all cleanup operations are complete.

All equipment used in an emergency response will either be decontaminated (shovels, face shields, hoses, protective clothing, etc.) or disposed of as hazardous waste materials. Although most equipment will be disposed of as hazardous waste material, decontamination equipment will be available for cleaning reusable items. In addition, all fire extinguishers and absorbent containers or other appropriate equipment will be refilled or replaced before facility operations resume.

12. Fire Prevention Plan (29 CFR 1910.38 (b)(1))

The potential workplace fire hazards and their proper handling and storage, procedures, potential ignition sources and their control procedures and the type of fire protection equipment or systems which can control a fire at the Pittsfield facility are listed in Appendix IV (see 29 CFR 1901.38 (b)(2)(i)). All in-place and portable fire extinguishing systems and sprinkler systems are inspected by GE Plant Security and are maintained by

a qualified outside vendor (see 29 CFR 1910.38(b)(2)(ii)). All records pertaining to inspections of fire extinguishers and sprinkler systems are kept by GE Plant Security.

13. Housekeeping (29 CFR 1910.38(b)(3))

All employees are required to follow good housekeeping procedures. The following general good housekeeping practices will be followed:

- Papers, cardboard, rags, and other combustible materials should be placed in an appropriate trash receptacle when discarding.
- Oil-soaked rags and debris should be placed in an appropriate hazardous waste container.
- Any small containers (five gallons or less) of a flammable material, such as solvents or gasoline, should be stored in an approved flammable container and labeled according to the GE HAZCOM Program. These containers, when not in use, will be stored in an approved Flammable Storage Cabinet. Flammable solvents used in the laboratory will not be stored on lab work benches when not in use but in approved Flammable Storage Cabinets.
- Employees are required to obey all No Smoking signs. Smoking is not allowed at the GE facility.
- Spilled flammable materials and oils will be immediately cleaned up if the employee can do so without endangering themselves. Spills larger than five gallons should be cleaned up by the appropriate trained cleanup personnel. All materials generated from a spill will be placed in appropriate containers and labeled.
- All spills should be reported to the observer's supervisor.
- Access to all fire extinguishers as well as eyewash and emergency showers will be kept clear of obstructions and maintained accessible.
- No employees or contractors are allowed to work alone in any unoccupied building. If working alone is absolutely necessary, arraignments must be made with GE Plant Security and radio or phone communications must be available to the employee.
- Accumulation of large quantities of combustible or flammable materials not in use is not allowed in any building. Debris and other materials will be disposed of in an appropriate container (dumpster, hazardous waste drum. etc.).
- Storage of flammable materials greater than the limit for a storage area or storage cabinet is not allowed. An employee should check with their supervisor for the amounts allowed and where materials can be stored.
- Storage of incompatible wastes or chemicals is not allowed. An employee should check with their supervisor on compatibility of materials.

14. Maintenance-Fire Equipment and Systems (29 CFR 1910.38(b)(5))

All new equipment and systems will be designed and installed according to the manufacturer's instructions and NFPA regulations. Fire potential will be taken into consideration prior to obtaining equipment or designing systems. The GE Facility Manager will be made aware of all equipment and systems installations. The Pittsfield Fire Department will be notified of all tank storage systems containing combustible or flammable materials. Permits from the fire department are required for all installations of above-ground or below-ground tank/piping systems of combustible or flammable materials. Fire department permits are also required for the replacement of existing fire hydrants within the GE facility. All in-place fire systems will be maintained and tested in accordance with GE's insurance provider's policy. All fire extinguishers will be inspected and tested per manufacturer's specifications and OSHA requirements.

15. Training

All employees and contractors will be trained on the elements of this program prior to working at the GE facility. If the plan has any significant changes, employees will be notified of the changes through their supervisor.

16. Compliance

All GE personnel are required to comply with the rules and work practices in this program. Non-compliance with this program can result in disciplinary action.

17. Program Updates

This Emergency Response Program will be reviewed annually and updated as necessary by the GE Facility Manager and/or the GE Project Manager.

Table 1

GE Management

Name	Title	Work Tel. No.	Alternate Tel. No.
Kevin Mooney	Senior Project Manager	413-553-6610	413-441-4619
Matthew Calacone	Senior Project Manager	413-553-6614	413-822-0082

Table 2

First Responders

Name	Title	GE Tel. No.	Alternate Tel. No.
Matthew Calacone	Senior Project Manager	413-553-6614	413-822-0082
Kevin Mooney	Senior Project Manager	413-553-6610	413-441-4938

Table 3

Other Supportive Response Personnel

Name	Title	GE Tel. No.	After Hours No.
GE Plant Security		413-553-6666 (emergency) 413-553-6625	413-553-6625
Veolia Environmental Services	Cleanup Contractor	1-800-354-2382	1-800-354-2382
Maxymillian Technologies	Cleanup Contractor	413-499-3050	413-499-3050

Appendix I

DESIGNATED ASSEMBLY AREAS FOR OCCUPIED BUILDINGS

BUILDING #	EXIT DIRECTION	ASSEMBLY AREA
105	WEST	NORTHWEST PARKING LOT – PLASTICS AVE
	NORTH	NORTHWEST PARKING LOT – PLASTICS AVE
	EAST	NORTHWEST PARKING LOT – PLASTICS AVE
	SOUTH	NORTHWEST PARKING LOT – PLASTICS AVE
64T	SOUTH	WEST SIDE OF 64R
	NORTH	EAST SIDE OF 64S
	EAST	WEST SIDE OF 64R
	WEST	EAST SIDE OF 64S
64G	NORTH	WEST SIDE OF 64R
	SOUTH	EAST SIDE OF 64S
	EAST	WEST SIDE OF 64R
	WEST	EAST SIDE OF 64S
78/Trailers	SOUTH	GATE 25 AREA
	NORTH	GATE 78 AREA
	EAST	GATE 78 AREA
	WEST	GATE 25 AREA

ASSEMBLY AREAS OF UNOCCUPIED BUILDINGS

ASSEMBLY AREAS FOR BUILDINGS THAT ARE NOT OCCUPIED ON A DAILY BASIS WILL BE NEAR THE SAFEST EXIT FROM THE BUILDING. IT IS THE RESPONSIBILITY OF THE PERSONS WHO EVACUATE TO NOTIFY GE PLANT SECURITY BY RADIO OR PHONE OF THEIR LOCATION.

Appendix II

FACILITIES & SECURITY UNIT

EMERGENCY RESPONSE REPORT
&
INCIDENT REPORT

TYPE OF EMERGENCY OR INCIDENT:

FIRE:	**MEDICAL:**	**SPILL:**	**ACCIDENT:**	**OTHER:**

DATE: _____ TIME: _____ DAY: _____

LOCATION OF EMERGENCY OR INCIDENT:

BUILDING: _____ FLOOR: _____ AREA: _____

UNITS RESPONDED:

	GE PLANT SECURITY:	
PITTSFIELD FIRE:	PITTSFIELD POLICE:	AMBULANCE:
OTHERS:		

NUMBER OF TOTAL PERSONNEL RESPONDING: _____

REPORT OF EMERGENCY OR INCIDENT: (THOSE INDICATED ABOVE WOULD RESPOND IF ACTUAL CALL)**

Appendix III

FIRST RESPONDER SPILL REPORT

GE-PITTSFIELD 1 PLASTICS AVENUE

REPORT BY:	PHONE NO.:	DATE::

SPILL OCCURRENCE

DATE: _____ TIME: _____ (AM / PM) Estimated / Actual

RESPONDER NOTIFIED

DATE: _____ TIME: _____ (AM / PM)

BUILDING and/or AREA OF SPILL:

_____

MATERIAL SPILLED

CHEMICAL NAME: _____

TRADE NAME [1]: _____

QUANTITY OF MATERIAL SPILLED

TOTAL [2]: _____ (gal / lbs.)

INSIDE BLDG [2]: _____ OUTSIDE BLDG [2]:: _____

IF OUTSIDE BLDG, HOW MUCH IS OFF-SITE [3]:: _____

MEDIA AFFECTED: (Check all that apply)

SOIL: _____ ASPHALT: _____ CONCRETE: _____

AIR (evap.): _____ WATER (Drainage, Waterway, Etc.) _____

ANY INJURIES?: YES / NO (circle one)

ANY POTENTIAL HAZARDS TO PUBLIC / EMPLOYEE HEALTH OR TO THE ENVIRONMENT[2]

YES / NO (circle one)

NARRATIVE OF SPILL:

_____

_____

_____

_____

_____

NOTES:

1. Obtain a copy of MSDS sheet or other technical data. Use this data to calculate individual chemical components.
2. If a spill occurs that exceeds a MDEP RQ, notify MDEP first
3. By default, MDEP is also the State Emergency Response Commission (SERC); however, you must tell MDEP why you are specifically reporting to them as the SERC.

(SEE NEXT PAGE)

Appendix III

FIRST RESPONDER SPILL REPORT

GE-PITTSFIELD 1 PLASTICS AVENUE

CHEMICAL[1]: _____

	RQ in lbs.		RQ in lbs.
PCB or Oil Calc's (CH5):		CERCLA Air Tox (CH8):	
MDEP (CH6):		SARA (CH9):	
CERCLA (CH7):			

ANY RQ's EXCEEDED: YES / NO (circle one)
If YES, NOTIFY PROPER AGENCIES AND AUTHORITIES AFTER COMPLETING THIS FORM.
If NO, FINISH FORM AND FILE.

RESPONSE ACTIONS:

Was spill contained? YES / NO (circle one) If NO, when will it be? _____
Who is cleaning up spill? GE / NON-GE (circle one) If NON-GE, who?
What equipment is being used for clean up? _____
What is to be done with cleaned up material? _____

AS APPLICABLE, THE FIRST RESPONDER IS TO CONTACT THE FOLLOWING AGENCIES / AUTHORITIES:

AGENCY & PHONE NO.	PERSON CONTACTED & LOG NO.	TIME & DATE
NATIONAL RESPONSE CENTER (800) 424-8802 Call for CERCLA & SARA RQ Exceedances Call ASAP, but within 24 hours		
EPA REGION I (617) 556-1133 or (888) 304-1133 Call for PCB RQ Exceedance or Off-Site Oil Call within 24 hours or next work day		
MDEP – Springfield (413) 784-1100 (work days) (888) 304-1133 (nights and weekends) Call for MDEP RQ Exceedances Call within 2 hours		

CONSENT DECREE REPORTING (IMMEDIATLEY)
ONLY APPLIES TO RELEASES ABOVE THE RQ FROM THE AREAS COVERED BY THE CD
Contact GE Management

Name	Work Telephone
Matthew Calacone	(413) 553-6614
Kevin Mooney	(413) 553-6610

(SEE NEXT PAGE)

Appendix III

FIRST RESPONDER SPILL REPORT

GE-PITTSFIELD 1 PLASTICS AVENUE

ADDITIONAL REPORTING

For off-site spills, For SARA RQ Exceedances, or any visible oil sheen on waterway

AGENCY & PHONE NO.	PERSON CONTACTED	TIME & DATE
SERC[3] (CALL MDEP)		
LEPC[3] (CALL 911 OR 448-9764) (Fire Dept call within 2 hours)		
GE Plant Security (413) 553-6625		

AS APPROPRIATE, PLANT SECURITY TO CONTACT THE FOLLOWING		
DEPARTMENT & PHONE NO.	**CONTACTED**	**TIME & DATE**
PITTSFIELD POLICE (911 or (413) 448-9702)		
PITTSFIELD FIRE (911 or (413) 448-9764)		

Appendix IV

FIRE PREVENTION PLAN/PLANT SOURCES OF IGNITION

LOCATION	TYPE OF HAZARD	GREATEST QUANTITY POTENTIALLY STORED	CONTAINER TYPE	FIRE PROTECTION STORAGE	FIRE PROTECTION STATIC ELECTRICITY	FIRE PROTECTION AMOUNTS	FIRE PROTECTION OTHER	FIRE PROTECTION SYSTEMS
Building 64 - Outside	Propane	15 - 20 cylinders	Cylinders	Steel Caged Cabinets	NA	Limited Quantities	No Smoking Signs	NA
Building 64 - Inside	Solvents	15 gal	Glass Containers	Flammable Cabinets	Grounding	Limited Quantities	No Smoking Signs	Sprinkler System, Fire Extinguishers
Buildings 64G & 64T - Inside	Solvents	1 gal	Glass Containers	Flammable Cabinets	Grounding	Limited Quantities	No Smoking Signs	Sprinkler System, Fire Extinguishers
Building 78 Flammable Storage Shed	Solvents	6 X 55gal	Drum	Flammable Cabinets	Grounding	NA	No Smoking Signs	Fire Extinguishers

Exhibit F-2 – Emergency Telephone Numbers

Exhibit F-2

EMERGENCY TELEPHONE NUMBERS

Agency or Emergency Entity	Phone Number(s)
City of Pittsfield, MA	
Fire Department (Local)	911 (413) 448-9761
Police Department	911 (413) 448-9702
Ambulance Services	911 (413) 499-2527
Department of Public Health	(413) 499-9411
Hospital - Berkshire Medical Center	(413) 447-2000
Town of Lenox, MA	
Fire Department (Local)	911 (413) 637-2345
Police Department	911 (413) 637-2346
Ambulance Services	911 (413) 637-2347
Town of Lee, MA	
Fire Department/Ambulance	911 (413) 243-2100
Police Department (Local State Police)	911 (413) 243-0600
Town of Stockbridge, MA	
Fire Department (Local)	911 (413) 298-4866
Police Department	911 (413) 298-4179
Ambulance Services	911 (413) 528-3632
Town of Great Barrington, MA	
Fire Department (Local)	911 (413) 528-0788
Police Department	911 (413) 528-0306
Ambulance Services	911 (413) 528-3632
Board of Health	(413) 528-0680
Hospital - Fairview Hospital	(413) 528-8600
Town of North Canaan, CT	
Fire Department/Ambulance	911 (860) 824-7366
Police Department	911 (860) 626-1820

Exhibit F-2

EMERGENCY TELEPHONE NUMBERS

Agency or Emergency Entity	Phone Number(s)
Town of Kent, CT	
Fire Department/Ambulance	911 (860) 927-3151
Police Department	911 (800) 953-9949
Town of New Milford, CT	
Fire Department (Local)	911 (860) 354-4023
Police Department	911 (860) 355-3133
Ambulance Services	911 (860) 355-1769
Town of Newtown, CT	
Fire Department (Local)	911 (203) 270-4383
Police Department	911 (203) 426-5841
Ambulance Services	911 (203) 270-4380
Town of Derby, CT	
Fire Department (Local)	911 (203) 732-1963
Police Department	911 (203) 734-1651
Ambulance Services	911 (203) 734-1593
Town of Shelton, CT	
Fire Department (Local)	911 (203) 924-1555
Police Department	911 (203) 924-4440
Ambulance Services	911 (203) 924-9211
Connecticut Hospital Contacts	
Bristol Hospital	(860) 585-3000
Waterbury Hospital	(203) 573-6000
Yale-New Haven Hospital	(203) 688-4242
Bridgeport Hospital	(203) 384-3000
Commonwealth of Massachusetts	
Department of Environmental Protection	(413) 784-1100 (Days) 1-888-304-1133 (Nights/Weekends)
State Police (Headquarters)	(860) 685-8000

Exhibit F-2

EMERGENCY TELEPHONE NUMBERS

Agency or Emergency Entity	Phone Number(s)
State of Connecticut	
Department of Energy and Environmental Protection	(860) 424-3000
State Police (Cheshire)	(413) 743-1501
National	
Chemtrec	1-800-424-9300
Poison Control	1-800-332-3073
National Response Center	1-800-424-8802
General Electric [1,2]	
Plant Security	(413) 553-6666 (413) 553-6625 (non-emergency)
Town of Lanesboro	
Fire Department	(413) 443-2321
Police Department	(413) 443-4107
Emergency Response Contractors	
Veolia ES Technical Solutions	(800) 354-2382 (24 hours)
Maxymillian Technologies	(413) 499-3050 (24 hours)
Other	
State Emergency Response Commission	(888) 304-1133 (Western Region, 24 hours)
Local Emergency Planning Committee	911 or (413) 448-9761
EPA New England Region Emergency Response Section	(617) 918-1260

Notes:

1. In case of a fire, spill or medical emergency the following GE Plant Security phone number should be used: Fire, Spill or Medical Emergency (413) 553-6666.
2. The 911 number should only be used in case the GE Plant Security phone numbers are not available.

Attachment G

Construction Monitoring Plan

General Electric Company

Construction Monitoring Plan

GE-Pittsfield/Housatonic River Site

Revised November 2024

Table of Contents

Abbreviations

CD	Consent Decree
CMP	Construction Monitoring Plan
EPA	United States Environmental Protection Agency
FSP/QAPP	Field Sampling Plan/Quality Assurance Project Plan
GE	General Electric Company
OMM Plan	Operation, Monitoring, and Maintenance Plan
PCBs	polychlorinated biphenyls
PM_{10}	particulates smaller than 10 micrometers in diameter
POP	Project Operations Plan
ppm	part per milion
QOL	Quality of life
RD/RA	Remedial Design/Remedial Action
Revised Permit	Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River
Revised QOL Plan	Revised Quality of Life Compliance Plan
ROR	Rest of River
SIP	Supplemental Information Package
Site	GE-Pittsfield/Housatonic River Site
TSS	total suspended solids
UDF	Upland Disposal Facility
UDF OMM Plan	UDF Operation, Monitoring, and Maintenance Plan

1 Introduction

This Construction Monitoring Plan (CMP), which is Attachment G to the revised Project Operations Plan (POP), describes monitoring activities to be implemented by the General Electric Company (GE) and its contractors during certain construction activities at the GE-Pittsfield/Housatonic River Site (Site) under the Consent Decree (CD) executed by GE, the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection, and other government agencies in October 1999 and entered by the U.S. District Court in Massachusetts on October 27, 2000 (EPA and GE 2000). Unlike the other plans that are attached to the POP, the CMP was not included in the 2013 version of the POP. The requirement for a CMP was added by Section II.H.9 of the Revised Resource Conservation and Recovery Act Permit (Revised Permit) issued by EPA to GE under the CD in December 2020 (EPA 2020) for the Rest of River (ROR) portion of the Site and Section 4.3.1.2 of the Final Revised ROR Statement of Work (Anchor QEA et al. 2021). Accordingly, a CMP was included in GE's January 2024 POP (Arcadis 2024a) to summarize the monitoring activities to be performed during construction activities at the ROR under the Revised Permit. The ROR is that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River in Pittsfield, Massachusetts. In accordance with the Revised Permit, the ROR Remedial Action includes not only remediation activities, but also the construction and operation of an on-site Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area. EPA provided conditional approval of and comments on the January 2024 POP, including the CMP, on July 22, 2024, directing GE to submit a revised plan. This present document constitutes that revised CMP.

The remainder of this CMP is organized as follows:

- Section 2 identifies the types of construction activities to be conducted by GE as part of the ROR Remedial Action. It also describes the general responsibilities of GE and its representatives in the implementation of the construction monitoring activities.
- Section 3 describes the various construction monitoring activities that will be implemented during the ROR Remedial Action.
- Section 4 provides references for documents cited in this plan.

The primary goal of construction monitoring is to verify that the construction is being conducted in accordance with the approved design and other applicable technical submittals, including required environmental and/or quality-of-life (QOL) standards. This revised CMP provides general requirements for implementation of a monitoring program during the construction phase of the ROR Remedial Action.

2 Applicability of Construction Monitoring Plan

This revised CMP focuses on monitoring activities that will be conducted during active construction phases of the ROR Remedial Action. The monitoring activities and requirements will vary in type, scope, and duration for the different geographic portions of the Site based on the location of the construction activities; the type, duration, and timing of the construction activities; physical site features and access limitations; and proximity to the public.

Therefore, the construction monitoring described herein may require modification to reflect the specific areas, remediation approaches, and construction methods as details related to the ROR Remedial Action are evaluated and determined during project planning and design. Any modifications will be identified in the appropriate technical design document(s), such as the Remedial Design/Remedial Action (RD/RA) Work Plan and/or Supplemental Information Package (SIP) for each ROR Remediation Unit (RU)[1] and the revised Final Design Plan and/or revised Operation, Monitoring, and Maintenance (OMM) Plan for the UDF.[2]

2.1 ROR Remedial Action Activities

Several types of activities are addressed by this revised CMP, including work at the RUs and UDF. A general (non-exhaustive) description of these activities is provided below.

- **General Construction Activities –** These include such activities as mobilization, equipment/material delivery, access and site preparation (including UDF construction), best management practice deployment, site restoration (including UDF closure), decontamination, and demobilization activities.
- **Soil Excavation –** This includes removal of soils from upland, floodplain, and riverbank areas.
- **Sediment Excavation/Dredging –** This includes removal of sediment from submerged or frequently inundated areas.
- **Material Handling –** This includes transport, staging, and processing of excavated or dredged materials and handling and placement of materials at the UDF.
- **Capping/Backfill –** This includes the transport, staging, and placement of soil, aggregate, and/or amendment (e.g., activated carbon) materials for use as backfill in excavated/dredged areas or as a cap in remediation areas or at the UDF.
- **Riverbank Reconstruction –** This involves the reconstruction of remediated riverbanks as required in the Revised Permit.
- **Waste Transportation –** This includes the transportation of waste materials to staging, storage, and treatment areas at the Site, or for disposal at the Site (e.g., the UDF) or at off-site facilities.

For the ROR Remedial Action, specific information related to final remediation extents, quantities, means and methods, and other details will be developed during the remedial design phase for each RU and provided in the

[1] The RUs that are part of the ROR Remedial Action were identified in GE's Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures (Anchor QEA, LLC 2022), approved by EPA on July 6, 2022. They correspond generally to the reaches of the ROR as designated by EPA.

[2] As discussed further below, the UDF Final Design Plan and UDF OMM Plan were initially submitted to EPA in February 2024 and were conditionally approved by EPA on September 12, 2024. In response to those conditional approvals, GE will revise those plans and will submit them to EPA by December 20, 2024.

Conceptual RD/RA Work Plan, Final RD/RA Work Plan, and SIP for each RU.[3] Likewise, specific design information for the UDF construction and operation was initially presented in the UDF Final Design Plan and UDF Operation, Monitoring, and Maintenance Plan (UDF OMM Plan), both submitted in February 2024 (Arcadis 2024b, 2024c) and conditionally approved by EPA on September 12, 2024. In accordance with those conditional approval letters, revised versions of the UDF Final Design and OMM Plans will be submitted on December 20, 2024, and will include further details related to the construction and operation of the UDF, including information related to material delivery and placement at the UDF. In addition, GE's program for addressing QOL impacts of these activities, including the establishment of QOL standards and monitoring of air, noise, and odor impacts, is presented in GE's Revised Quality of Life Compliance Plan (Revised QOL Plan; Anchor QEA and Arcadis 2024), submitted on November 22, 2024.

2.2 Construction Monitoring Responsibilities

Given the number and different types of properties within the ROR Remedial Action area and the large range of construction activities, the contents of this CMP are necessarily general and will be subject to further definition (as needed) in forthcoming technical design document(s) for the RUs and/or UDF. As a result, specific construction monitoring responsibilities are not detailed herein for each RU or the UDF.

In general, GE/GE's Representative (defined in Section 2 of the revised Construction Quality Assurance Plan, which is Attachment E to the revised POP) and/or the selected contractor(s) will be responsible for implementation of the monitoring activities described in this CMP and for adhering to the requirements of this plan. On a case-by-case basis, GE will designate other entities to serve as GE's Representative(s) for purposes of performing the construction monitoring functions described herein or those that may be otherwise described in separate technical design document(s).

[3] Thus far, the Conceptual RD/RA Work Plan for Reach 5A (Anchor QEA et al. 2023) and the Conceptual RD/RA Work Plan for Reach 6 (Anchor QEA et al. 2024), which provide conceptual details for the Reach 5A and Reach 6 remediation designs, were submitted to EPA on September 28, 2023 and October 31, 2024, respectively, Both of those work plans are currently under EPA review.

3 Construction Monitoring Activities

The primary goal of construction monitoring is to verify that the construction is being conducted in accordance with the approved design and other applicable technical submittals, including required environmental and/or QOL standards. Because the technical details for each component of the ROR Remedial Action have not been fully developed at this time, this section discusses, in general terms, the anticipated construction monitoring activities that may be implemented during some or all the construction activities for the ROR Remedial Action. The technical design document(s) will describe the specific construction monitoring requirements for the subject ROR Remedial Action component, including any modifications to the general monitoring activities described herein. The description below is a general guide to activities to be conducted during remediation activities. The UDF- and RU-specific plans may contain modifications, additions, and revised monitoring frequencies.

3.1 Weather

Weather monitoring will be performed throughout the performance of the construction activities. During the ROR Remedial Action construction activities, weather-related data will be recorded using an on-site meteorological station to be located at the GE Pittsfield Facility, the UDF property, and/or another to-be-determined location, depending on the location of construction activities (as provided in the project-specific work plan). These data and other readily available public weather data for the area near the work area will be reviewed, as necessary, to support appropriate evaluations. For example, weather data will be reviewed in conjunction with air monitoring data if an applicable air quality standard is exceeded.

At a minimum, the following parameters will be recorded daily during the ROR Remedial Action at the designated on-site meteorological station(s):

- Wind speed and direction;
- Relative humidity;
- Air temperature; and
- Precipitation.

In addition, weather forecasts will be monitored throughout the construction operations for safety purposes and to support construction operations and planning. Forecasts of significant weather events (e.g., heavy rain, strong winds, lightning, snow, freezing temperatures, and flooding) will be reviewed daily to protect worker safety and construction equipment, to support project planning, and to protect active work areas and minimize the potential for the spread of contamination.

3.2 River Flow

In conjunction with monitoring weather forecasts, river flow conditions will be monitored daily during active remediation activities in the river or floodplain. Routine river flow monitoring is necessary to protect active work areas, both in the water and in the floodplain, and to minimize the potential for the spread of contamination. At a minimum, flow data from nearby U.S. Geological Survey flow-monitoring stations along the Housatonic River will be reviewed and noted on daily logs. In addition, river staff gages or water surface elevation boards may be installed along certain portions of the river to provide for localized river flow and water depth monitoring.

3.3 Surveys

Surveys may be required to confirm that the cut and fill grades required by the design are met during construction and to document pre- and post-construction conditions. Survey requirements are discussed in the revised Construction Quality Assurance Plan (Attachment E to the revised POP).

3.4 Structural/Geotechnical Monitoring

Structural and/or geotechnical monitoring may be required if work is anticipated near structures, buildings, inclines, infrastructure (e.g., roads, bridges, culverts), and other sensitive features. If required, this monitoring may include documenting pre- and post-construction conditions, including photographs and video as appropriate. Additional monitoring techniques, such as inclinometers, vibration monitoring (particularly near infrastructure), and optical monitoring, may be needed. Location-specific requirements will be determined during the individual remedial designs.

Additional geotechnical monitoring may be required for deep excavations. At such locations, a geotechnical engineer will determine whether the excavations warrant such considerations during design. If additional monitoring is necessary, the geotechnical engineer will either provide location-specific requirements as part of the design or provide guidelines for the selected contractor to develop a monitoring program (if the design specifies that the contractor is to determine the approach).

3.5 Site Control Inspections

During the construction activities, erosion and sedimentation controls, stormwater management controls, water quality controls, dust controls, and/or other best management practices will be used, as appropriate, to minimize erosion, sedimentation, and water quality impacts. Examples of such controls include silt fencing, filter socks, check dams, turbidity curtains, and water application on construction road surfaces. These control measures will require periodic inspection and maintenance during construction to verify that they are effective and functioning as intended. Details regarding the locations and types of controls and best management practices will be determined during the design and construction planning phases and will be described in the technical design deliverables or contractor-prepared plans. These deliverables may include the development of a Stormwater Pollution Prevention Plan, an Erosion and Sedimentation Control Plan, and/or other water quality control plans depending on the nature and extent of the construction operations. Details regarding the required inspection frequency will also be described in those documents.

3.6 Air Quality Monitoring

Air quality monitoring will be conducted during the ROR Remedial Action to demonstrate compliance with air quality standards established in the Revised QOL Plan, which include a Notification Level and an Action Level. Ambient air monitoring during the remediation activities and operation and closure of the UDF will include monitoring for particulates smaller than 10 micrometers in diameter (PM_{10}) and polychlorinated biphenyls (PCBs). During construction of the UDF or other ground-disturbance activities that do not involve handling of PCB-containing soils or sediments, the ambient air monitoring will be conducted only for PM_{10}. Details of the air monitoring requirements are discussed in the Revised QOL Plan and the revised Ambient Air Monitoring Plan (AAMP; Attachment D to the revised POP). In addition, Appendix G and Attachment F to GE's latest revised Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP; Arcadis 2023), submitted on December 21, 2023 and conditionally approved

by EPA on March 21, 2024 describe the standard procedures and methodologies to be used for ambient air sampling and analysis. The Revised QOL Plan and the revised AAMP also describe the notifications and other actions to be taken in the event of an exceedance of the Notification or Action Level.

3.7 Noise Monitoring

Noise monitoring will be conducted during the ROR Remedial Action at a frequency specified in the Revised QOL Plan (with any modifications in project-specific submittals) and to verify compliance with the noise QOL standards presented in that revised plan. In the event of exceedances of the noise standards, the actions specified in the Revised QOL Plan will be taken, including consideration of one or more contingency or mitigation measures.

Noise monitoring will be conducted at representative locations near the closest receptor to the work activities or between the active work areas and the closest receptor. Noise monitoring locations will be selected to monitor noise at the following locations: (1) active sediment, riverbank, and floodplain remediation areas in proximity to receptors; (2) temporary material staging areas; (3) the UDF area; and (4) rail loading and unloading areas. Details related to the target noise monitoring locations will be further specified, as appropriate, in the technical design document(s) for each RU and the UDF (i.e., the Final RD/RA Work Plan or SIP for each RU and the revised UDF OMM Plan) based on planned activities and the planned work area. The final monitoring locations will be determined in the field based on the following: location of construction activities; location of nearest potential receptor(s); property access; proximity to other noise sources (e.g., roads, commercial operations); and location-specific conditions, such as, but not limited to, topography and vegetation density. The noise monitoring stations will generally be co-located with the air monitoring stations (if air monitoring is also required for the same activity / area by the project-specific work plan).

Noise monitoring events will be continuous during hours of operation so that one-hour averages can be computed across the entire construction day. When initial noise monitoring is conducted at the start of a new type of construction activity, it will be conducted on a day that is representative of full-scale operations, as opposed to the first day of any operations in the area.

Noise monitoring will be performed using a real-time sound level meter, including dosimeter (e.g., 3M/Quest Sound Pro or equivalent), environmental enclosure with microphone extender/stem attachment, microphone wind screen, tripod, calibration kit, and external battery. In addition, an anemometer will be co-located with the noise monitoring equipment to measure the wind at the location of the microphone. Rotating vane, hot wire, pressure gradient, or rotating cups anemometers are all adequate methods for measuring wind speed at the microphone.

Meteorological conditions can affect noise measurements in several ways. In addition to impact by wind, extremes in temperature and relative humidity affect critical components of sound level meters. For example, during conditions of high humidity, water condensation can form on the vibrating microphone membrane, causing a “popping” sound that can contaminate noise measurements. Rain or snow on highway pavement can alter the levels and the frequencies of tire and pavement noise, causing it to vary in unpredictable ways from levels on dry pavements, on which vehicle noise source characteristics are based. In addition, at an ambient noise level of 40 to 45 decibels, wind speeds of more than 11 miles per hour may begin to contaminate noise measurements with a rumbling noise because of frictional forces on a microphone covered with a wind screen.[4] As such, weather data collected as part of the air quality monitoring program or available from off-site sources (e.g., online weather records) will be used to evaluate data collected as part of noise monitoring, as appropriate.

[4] Without the screen, the effect would be present at a much lower wind speed.

Steps 1 through 8 below outline the field reconnaissance and initial noise monitoring station setup. All setup activities will be performed in accordance with the equipment manufacturer's manual.

1. Perform field reconnaissance to assess and identify the locations to be used for noise monitoring, considering the factors identified above. Document the location using survey (i.e., global positioning system) and/or reference site features.
2. Deploy the noise monitoring equipment. Set up the tripod and environmental enclosure, attach the microphone extender/stem attachment, place the dosimeter in the enclosure, and attach the microphone wind screen. The height of the microphone should be set at average head level (i.e., approximately five feet off the ground) to provide access to equipment for operation and maintenance.[5]
3. Verify that the telemetry system is installed (either pre-configured by the vendor or based on manufacturer's recommendations) and working. Telemetry can be confirmed by logging into the data management site and confirming data transfer. Battery voltage measurements are often part of the data telemetry, allowing personnel to confirm telemetry from the data management website.
4. Program the dosimeter for operation. Programming should follow the manufacturer guidelines for community (a.k.a. environmental) noise monitoring.
5. Set meter to start monitoring at a consistent daily start time (e.g., 0600) for consistency in data collection. Program the meter to run in accordance with the required duration established in the appropriate technical design document(s).
6. Perform initial calibration of the dosimeter using the manufacturer-provided speaker at the recommended calibration frequency. The speaker will emit an audible noise at a known level, and the dosimeter will be calibrated to match that known value.
7. Obtain photographs of the noise monitoring station once setup is complete; photographs should include background conditions.
8. Repeat Steps 1 through 7 at each noise monitoring location.

Steps 9 through 13 outline the monitoring efforts, data recovery, and data processing.

9. Check meters at least one time per day of use to confirm proper operation. The dosimeter, power source, and microphone will be checked to confirm operation within the manufacturer's specifications. Adjustments, maintenance, or equipment replacement will be performed, as needed.
10. Perform additional calibration daily during use in accordance with Step 6 and the manufacturer's recommendations.
11. Retrieve noise data from the prior day at the start of each work day at a minimum. Based on the equipment selected, data will likely be recovered from the dosimeter by retrieving the SD card. The card will be replaced with a second card for recording the next day's data. The SD cards will be used on a rotating basis. Each SD card will be clearly labeled by monitoring location and shift (i.e., day or night shift).
12. Record the location, time, prior day meteorological conditions, any noted significant sound(s) not related to construction activities, equipment used (model and serial number), and equipment calibration during each meter check and/or data retrieval event.

[5] Attach an external battery, in secondary containment, if the unit will need to run for more than eight hours to ensure an adequate power source.

13. Repeat Steps 9 through 12 at all noise monitoring locations.

Use the manufacturer-provided software (e.g., 3M detection management software) to retrieve the data from the SD card for data analysis and calculation. Create one file per day for each location.

3.8 Odor Monitoring for Hydrogen Sulfide

GE's Revised QOL Plan includes a QOL standard for odor. One component of that standard relates to hydrogen sulfide (H_2S), which has a distinct rotten-egg smell. It specifies that, if an odor complaint or report is received that relates to the distinct rotten-egg smell of H_2S, GE will conduct H_2S monitoring at the work area perimeter to assess compliance with the numerical QOL standard for H_2S established in the Revised QOL Plan – a one-hour average concentration of 0.01 part per million (ppm). Such odor monitoring will be performed at two locations – one upwind and one downwind of the suspected source. H_2S levels will be determined by hand-held direct-reading H_2S meters, or, if such a meter is not available, through use of an evacuated Tedlar® bag (or equivalent) fitted with a sampling pump, with subsequent measurement of the H_2S concentration in the bag.

Steps 1 through 4 below outline the odor monitoring procedures. All testing, inspection, maintenance, and calibration activities will be performed in accordance with the equipment manufacturer's manual, where applicable.

1. Based on the information collected as a result of the odor complaint or report, the possible source of the H_2S odor will be examined. Data collected by the on-site meteorological station(s) (see Section 3.1) will be used to determine the wind direction relative to the possible H_2S source so as to identify two locations – one upwind and one downwind of the suspected source – for H_2S monitoring.
2. H_2S levels will be measured at each of the two locations using a hand-held meter (e.g., Arizona Instruments Jerome Meter or equivalent) that provides direct readings, with a sensitivity of 4.3 micrograms of H_2S per cubic meter (0.003 ppm). In the event that H_2S sampling is required and a hand-held instrument is not immediately available, an evacuated Tedlar® bag (or equivalent) and air sampling pump will be used to obtain a sample, with subsequent analysis using the handheld meter within one hour from the completion of sample collection, as follows:
    a. Ambient air will be pumped into a Tedlar® bag (or equivalent) at a prescribed flow rate over an approximately one-hour time period to yield an integrated ambient air sample. A SKC Universal Sample Pump (or performance equivalent technology) will be used to collect the one-hour integrated ambient air sample.
    b. At the conclusion of sample collection, the Tedlar® bags (or equivalent) will be brought to the field laboratory for analysis and the bag air sample will be attached to a Jerome Hydrogen Sulfide Analyzer (or equivalent technology) using flexible tubing for analysis.
3. Collect field data during H_2S sampling, including the following (as necessary):
    a. Location ID;
    b. The location of duplicate samples (for Tedlar® bag sampling);
    c. Sample date and time (start and end);
    d. Total sampling time and volume (for Tedlar® bag sampling);
    e. Initial and final flow rate and RPD (for Tedlar® bag sampling);
    f. Weather conditions (wind direction, wind speed, temperature and barometric pressure);

g. Sample ID;

h. H_2S concentration (if measured using a hand-held meter);

i. General description (comments); and

j. Sampler initials.

4. Compare the measured one-hour H_2S concentration to the numerical QOL standard for H_2S established in the Revised QOL Plan (0.01 ppm). If appropriate, implement the notifications and other response actions described in the Revised QOL Plan.

3.9 Surface Water Quality Monitoring

Surface water quality monitoring will be conducted in the main river channel as part of certain construction activities (described below) to identify, evaluate, and respond to potential water column impacts that may result from the ROR Remedial Action at each RU. The surface water quality monitoring program will include continuous turbidity monitoring, routine and evaluative water column sampling (including field measurements of temperature, pH, and conductivity), and visual observations. Unless otherwise specified in the RU-specific technical design document(s), routine turbidity monitoring and water column sampling will be performed in the main river channel during intrusive remediation activities in the river and along the riverbanks, including sediment removal and riverbank soil removal, and during intrusive remediation activities in backwaters or any other waterbody with a hydraulic connection to the Housatonic River. Turbidity monitoring will also be performed in the main river channel during restoration activities such as in-water backfilling or engineered capping activities, including restoration activities in backwaters or any other waterbody with a hydraulic connection to the Housatonic River. The monitoring described in this paragraph will be conducted at locations relatively near the active work areas.

In addition to water quality monitoring near active work areas, monitoring for turbidity, total suspended solids (TSS), and PCBs will be conducted at a location farther downstream from the active work area(s). The farther downstream location will coincide with either the current Woods Pond Dam or Rising Pond Dam monitoring location where sampling is being conducted in accordance with the Interim Baseline Surface Water Monitoring Program Report (Anchor QEA and Arcadis 2023) and its addendum (Anchor QEA 2023), but only when those locations are not serving as the immediate downstream monitoring locations for real-time turbidity monitoring. At these farther downstream locations, PCB and TSS sampling, along with turbidity monitoring, will be conducted monthly during active river remediation activities.

Surface water quality monitoring is not anticipated for construction or operation activities related to the UDF.[6]

3.9.1 Turbidity Monitoring

Real-time turbidity measurements will be collected and evaluated to assess construction-related impacts to water quality and the effectiveness of turbidity control measures. For each active work area, two continuous turbidity monitors will likely be deployed, one upstream of the active work area and one downstream of the active work area (and downstream of erosion and sedimentation control measures, such as turbidity curtains). Monitoring locations will be chosen based on channel morphology and accessibility so as to produce durable and reliable monitoring across a variety of potential flow conditions. Specific details on the locations of monitors will be included in the RU-specific technical design document(s). The monitors will be deployed at least one week before construction to obtain

[6] Groundwater monitoring at the UDF area will be described in the revised UDF OMM Plan.

baseline data and confirm that equipment is working properly. The timing and specific location of deployment will be specified in RU-specific technical design document(s).

At each monitoring location, turbidity will be monitored in real time using a turbidity monitoring system, consisting of the following main components: data station, turbidity sensor, submersible data-logging system, telemetric data transmitter, and computer software. Unless otherwise required by the RU-specific technical design document(s), the turbidity probe will be suspended at the approximate mid-depth elevation at each of the upstream and downstream locations. Turbidity levels will be measured using International Organization for Standardization 7027 method and reported in nephelometric turbidity units (NTUs). Turbidity levels will be logged a minimum of every 15 minutes and downloaded and reviewed at least once per day to assess potential changes in water column turbidity. Upstream and downstream data will be compared with the following turbidity action level, which has also been approved or used by EPA on prior remediation projects at this Site involving the Housatonic River or Unkamet Brook (including GE's Upper ½-Mile Reach and Unkamet Brook Area Removal Actions and EPA's 1½-Mile Reach Removal Action):

$$\text{Turbidity}_{\text{Downstream}} \geq \text{Turbidity}_{\text{Upstream}} + 50 \text{ NTUs}$$

In the event that any of the 15-minute readings recorded at the downstream location exceeds the above turbidity action level, a number of site assessment activities will be initiated, including, but not limited to, the following:

- Review of the ongoing removal and/or other construction activities and the potential need for modification of the condition or performance of the existing erosion and sedimentation control measures; and/or
- Continued monitoring at the downstream location to determine whether the exceedance was an anomaly or whether the elevated reading was a short-duration event.

If it is determined that the turbidity action level exceedance was not an anomaly or short-duration event (e.g., if an exceedance is observed for two or more consecutive 15-minute readings), evaluative water column samples will be collected at both the upstream and downstream locations, using the collection and analysis protocols described in Section 3.8.2, for analysis of total PCBs and TSS. The resulting data will be compared to the upstream and downstream turbidity data to assess whether the elevated downstream turbidity reading is also reflected in the PCB and TSS data. This additional, evaluative water column sampling will be continued daily until the turbidity action level is no longer exceeded.

If these assessment activities indicate that the elevated downstream turbidity reading reflects a water quality impact that could persist or recur and that it is related to the removal or other construction activities, the construction activities will be modified to the extent feasible or additional controls will be implemented. These measures will remain in place until compliance with the turbidity action level is achieved and GE demonstrates to EPA that such modifications and/or additional controls are no longer necessary.

In the event of an exceedance of the turbidity action level, GE will notify EPA as soon as possible but no later than 24 hours after the exceedance is observed. In addition, GE will submit proposed corrective measures (if needed) for EPA approval within 48 hours of the observation of a turbidity action level exceedance.

3.9.2 Water Column Sample Collection

Since April 2023, following implementation of an interim baseline surface water monitoring program in 2022, water quality samples have been collected on a monthly basis from various locations along the Housatonic River for analysis of PCB congeners (using EPA Method 1668C) and TSS (using EPA Method SM 2540D) as part of GE's ROR baseline surface water sampling program. This ongoing program is being performed in accordance with the Interim Baseline Surface Water Monitoring Report and its addendum. Data collected under this program will be

used to provide baseline information for comparison to routine and/or construction-related water quality samples collected during remediation activities.

At the start of each new type of intrusive in-water construction removal activity (e.g., dredging, bank soil removal) in each construction season (for construction anticipated to last more than one year), routine water column samples will be collected weekly in accordance with Appendix B1 (Standard Operating Procedure for Surface Water Grab Sampling and Velocity Measurement) of GE's recent (December 2023) revised FSP/QAPP. Specifically, these water column samples will be collected using the same the approach implemented during the ongoing baseline sampling program (e.g., mid-depth grab samples collected from multiple locations across the width composited into one sample per location) from locations co-located with the turbidity monitors to be installed upstream and downstream of the work area, with details related to the sampling method and locations to be provided in the RU-specific technical design document(s). The samples will be analyzed for PCB congeners by EPA Method 1668C and TSS by EPA Method SM 2540D to allow for comparison to data from the ongoing baseline program. During sample collection, temperature, pH, and conductivity will be measured in the field at each sample collection location in accordance with Appendix A1 (Standard Operating Procedure for Field Measurement of Water Parameters) of the recent revised FSP/QAPP; and the results of these measurements will be reported with the PCB results.

The PCB sampling data will be reviewed during construction to assess potential impacts to the water column. Upstream and downstream PCB data will be compared with the following PCB action level, which has been approved or used by EPA on prior remediation projects at this Site involving the Housatonic River or Unkamet Brook (including GE's Upper ½-Mile Reach and Unkamet Brook Area Removal Actions and EPA's 1½-Mile Reach Removal Action):

$$PCBs_{Downstream} \geq PCBs_{Upstream} + 5 \text{ micrograms per liter } (\mu g/L)$$

In the event that the PCB action level is exceeded, a number of site assessment activities will be initiated, including, but not limited to, the following:

- Review of the ongoing removal activities and the potential need for modification of the condition or performance of the existing erosion and sedimentation control measures; and/or
- Collection of additional, evaluative water column samples from various locations within or adjacent to the removal area in an effort to identify the potential source(s) of the elevated PCB result.

If these assessment activities indicate that the elevated downstream PCB result reflects a water quality impact that could persist or recur and that it is related to removal activities, the construction activities will be modified to the extent feasible or additional response measures will be implemented. Appropriate response measures for this situation will be described in the RU-specific technical design document(s). GE will continue daily evaluative water column sample collection, as well as the construction modifications or other response measures (as appropriate), until compliance with the PCB action level is achieved and GE demonstrates to EPA that such modifications and/or additional measures are no longer necessary.

In the event of an exceedance of the PCB action level, GE will notify EPA as soon as possible but no later than 24 hours after the exceedance is observed. In addition, GE will submit proposed corrective measures (if needed) for EPA approval within 48 hours of the observation of a PCB action level exceedance.

If the results from the first three weeks of routine water column samples indicate that PCB levels are acceptable (i.e., do not exceed the PCB action level), routine sampling will then be conducted every other week for each area of active construction for the duration of that construction activity. Should the data collected every other week indicate that construction activities are not significantly impacting water quality, GE may propose to EPA to further reduce the routine water column sampling frequency. During the initial weekly sampling period (i.e., for the first

three weeks), the laboratory turn-around time for analytical data will be “rush”/”expedite”; following this initial period, the laboratory turn-around time will be increased to “standard.”

As discussed above, evaluative water column sampling may be required by an exceedance of the turbidity action level (see Section 3.8.1) or PCB action level. If required, such water column samples will be collected using the same procedures as the routine sampling described above and submitted for rush/expedite analysis of PCB congeners and TSS.

3.9.3 Visual Observations

The remediation contractor and/or GE/GE’s Representative will visually observe the water surface for the presence of turbidity and/or sheens during in-water construction activities (i.e., intrusive remediation activities in the river and along the riverbanks, including sediment removal and riverbank soil removal, and intrusive remediation activities in backwaters or any other waterbody with a hydraulic connection to the Housatonic River). If water quality impacts are observed, the observer will notify the construction manager and GE and turbidity monitoring data will be reviewed. GE will make any notifications required by law. Corrective actions to address the observed impacts may be implemented, including, but not limited to, deploying sorbent booms or pads; deploying, repairing, or replacing turbidity curtains; or slowing construction in the affected area. Frequency of visual observations and contingency responses will be included in the RU-specific technical design documents.

3.10 Water Treatment/Discharge Sampling

On-site water treatment may be required as part of certain construction activities to treat water generated from sediment, soil, and debris removal, staging, and processing, stormwater that accumulates in material staging area exclusion zones, backwash water generated during operation of water treatment systems, and water used for decontamination. Details associated with the water treatment and discharge will be developed during design and described, as appropriate, in the technical design document(s). The requirements for sampling and testing of the temporary on-site water treatment system(s) will also be determined, as applicable, during the design phase and will be based on applicable substantive requirements for the discharge of such treated water. It is anticipated that the sampling and testing of effluent from such water treatment system(s) will be performed for PCBs and TSS. The design documents will describe the sampling and testing requirements. The management and treatment of water and leachate at the UDF area will be described in an addendum to the revised UDF Final Design Plan.

3.11 Imported Materials Testing

Sampling of sediment capping, soil cover, and backfill material may be required to confirm that materials imported to the ROR area for use as soil cover and/or backfill meet the applicable requirements for use of such material. The general requirements for sampling and use of sediment cap, soil cover, and backfill materials are presented in the revised Soil Cover/Backfill Characterization Plan (Attachment B to the revised POP).

Other materials to be imported beyond those covered by that plan (e.g., aggregate/stone, riprap, asphalt, erosion control materials, geosynthetics, vegetation) will also require some level of testing or quality control. Specific material types and testing requirements will be included in the RU-specific technical design documents.

3.12 Cap Verification

Cap verification monitoring may be required to verify that the materials and installation of engineered sediment caps meet the requirements of the design. Such verification requirements will be included in the individual technical design documents and will likely include requirements specific to the following cap elements, as applicable:

- Cap material verification, including appropriate amendment dose;
- Monitoring of cap placement thickness and extent;
- Monitoring of erosion protection materials; and
- Post-placement verification that the in-place amendment content in the isolation layer material meets the associated design requirements.

3.13 Reporting

Unless otherwise stated in the RU-specific technical design document(s), the results of the construction monitoring will be provided to EPA on a routine basis during construction (e.g., in periodic construction progress meetings or reports) in addition to inclusion (as appropriate) in the monthly progress reports under the Consent Decree. In addition, as described in the Revised QOL Plan, GE's website will include a summary of QOL monitoring data collected during construction activities, such as air and noise monitoring data (including any exceedances of applicable QOL standards), which will be uploaded to the website within 72 hours following receipt of the data.

4 References

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