



Kevin Mooney
Senior Project Manager
Corporate Holdings, GE Aerospace

1 Plastics Ave.
Pittsfield, MA 01201

T (413) 553-6610

Re: GE-Pittsfield/Housatonic River Site

**Rest of River (GECD850)
Revised Quality of Life Compliance Plan**

Dear Mr. Carli-Dorsey

In accordance with the conditional approval letter issued by EPA on J
herewith for EPA's review and approval the

Revised Quality of Life Compliance Plan for the Rest of
River Remedial Action, prepared for GE by Anchor QEA and Arcadis. A hard copy will also be mailed
to you.

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

Very truly yours,

A handwritten signature in blue ink that reads "Kevin Mooney". The signature is written in a cursive style and is contained within a rectangular box.

Kevin G. Mooney
Senior Project Manager

Enclosure

Cc: (via electronic mail except where noted)

Dean Tagliaferro, EPA
John Kilborn, EPA
Richard Fisher, EPA

Michael Gorski, MassDEP
Tamara Cardona-Marek, MassDEP
Ben Guidi, MassDEP
Michelle Craddock, MassDEP
Jeffrey Mickelson, MassDEP
Mark Tisa, MassDFW
Eve Schluter, MassDFW
Betsy Harper, MA AG
Traci Iott, CT DEEP
Susan Peterson, CT DEEP
Graham Stevens, CT DEEP
Carol Papp, CT DEEP
Lori DiBella, CT AG
Whitney Behr, USFWS
Mark Barash, US DOI
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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 Graveling, Arcadis
Dennis Lowry, AECOM
James Bieke, Counsel for GE
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November 2024
Housatonic River – Rest of River



Revised Quality of Life Compliance Plan

Prepared for General Electric Company
Pittsfield, Massachusetts

November 2024
Housatonic River – Rest of River

Revised Quality of Life Compliance Plan

Prepared for
General Electric Company
1 Plastics Avenue
Pittsfield, Massachusetts 01201

Prepared by
Anchor QEA
290 Elwood Davis Road, Suite 340
Liverpool, New York 13088

In Conjunction with
Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street, Suite 300
Syracuse, New York 13202

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Figure 4-1	Comparison of Anticipated ROR Remediation Noise Levels with Other Common Noise Levels

ATTACHMENTS

Attachment A	EPA Fact Sheet Entitled, Rest of River Cleanup and the Upland Disposal Facility Will Not Pose a Health Threat from Airborne PCBs
Attachment B	Summary of Noise Ordinances for Municipalities with Active Rest of River Remediation
Attachment C	Summary of Light Ordinances for Municipalities with Active Rest of River Remediation

ABBREVIATIONS

µg	microgram
AAMP	<i>Ambient Air Monitoring Plan</i>
ASOS	Automated Surface Observation System
BMP	best management practice
CD	Consent Decree
dBA	A-weighted decibel
EPA	U.S. Environmental Protection Agency
Final Revised OSS	<i>Final Revised Overall Strategy and Schedule for Implementation of Corrective Measures</i>
Final Revised SOW	<i>Final Revised Rest of River Statement of Work</i>
FSP/QAPP	<i>Field Sampling Plan/Quality Assurance Project Plan</i>
GE	General Electric Company
GPR	ground-penetrating radar
GPS	Global Positioning System
LOA	level of distant odor awareness
m ³	cubic meter
NAAQS	National Ambient Air Quality Standard
OMM	Operation, Monitoring, and Maintenance
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl
PM ₁₀	particulate matter with a diameter less than 10 micrometers
POP	<i>Project Operations Plan</i>
ppm	part per million
PSI	Pavement Serviceability Index
QOL	Quality of Life
RD/RA	Remedial Design/Remedial Action
Revised Final Permit	Revised Final Resource Conservation and Recovery Act Permit Modification
Revised QOL Compliance Plan	<i>Revised Quality of Life Compliance Plan</i>
Revised T&D Plan	<i>Revised On-Site and Off-Site Transportation and Disposal Plan</i>
ROR	Rest of River
RU	Remediation Unit
SIP	Supplemental Information Package
Site	GE-Pittsfield/Housatonic River Site subject to Consent Decree
SOW	Statement of Work
UDF	Upland Disposal Facility

UDF Final Design Plan	<i>Upland Disposal Facility Final Design Plan</i>
UDF OMM Plan	<i>Upland Disposal Facility Operation, Monitoring, and Maintenance Plan</i>
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard

1 Introduction

1.1 Background

On December 16, 2020, pursuant to the 2000 Consent Decree (CD) for the GE Pittsfield/Housatonic River Site (Site; EPA and GE 2000), the U.S. Environmental Protection Agency (EPA) issued to the General Electric Company (GE) a final revised modification of GE's Resource Conservation and Recovery Act Corrective Action Permit (Revised Final Permit; EPA 2020) for the Housatonic Rest of River (ROR). 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 (the Confluence). The Revised Final Permit set forth a Remedial Action selected by EPA to address polychlorinated biphenyls (PCBs) in the ROR.

The Revised Final Permit required GE to develop and submit a Statement of Work (SOW) specifying the deliverables and activities that GE will conduct to design and implement the ROR Remedial Action. In accordance with that requirement, after receipt of EPA's comments on an earlier version, GE submitted a *Final Revised Rest of River Statement of Work* (Final Revised SOW; Anchor QEA et al. 2021) on September 14, 2021, and EPA approved it on September 16, 2021.

Section II.H.11 of the Revised Final Permit and Section 4.3.1.3 of the Final Revised SOW require GE to prepare a Quality of Life (QOL) Compliance Plan that discusses how the following topics will be addressed during remediation: (1) potential air quality, noise, odor, and light impacts; (2) potential impacts on recreational activities; (3) road use, including restrictions on transportation of waste material through certain residential areas¹ and methods to minimize and mitigate transportation-related impacts to neighborhoods, infrastructure, and the general public; (4) coordination with local governments and affected residents/landowners at or near areas impacted by remediation; and (5) community health and safety. Each of those topics is discussed further in Section 4.3.1.3 of the Final Revised SOW. On December 20, 2023, GE submitted a *Quality of Life Compliance Plan* (Anchor QEA 2023). On July 22, 2024, EPA issued a conditional approval letter for that plan, requiring GE to submit a revised plan that addresses EPA's conditions. This *Revised Quality of Life Compliance Plan* (Revised QOL Compliance Plan) constitutes that revised plan.

If the Remedial Design/Remedial Action (RD/RA) Work Plans for a particular area of the ROR indicate the need for revised QOL activities that are not already described in the specific work plans for that area, GE will further update this Revised QOL Compliance Plan or issue an addendum to this plan for EPA review and approval to address such conditions.

¹ Section II.H.11.c of the Revised Final Permit identifies specific roads where restrictions on the transport of waste material through residential areas are required.

1.2 Project Setting and Remedial Action Overview

The Housatonic River is approximately 149 miles long. Its headwaters begin in northwestern Massachusetts. The river flows southeast through western Connecticut and into the Long Island Sound. The ROR area consists of the portion of the Housatonic River and its backwaters and floodplain (excluding portions of certain residential properties) downstream of the Confluence. The ROR area subject to the Revised Final Permit is shown on Figure 1-1 and identified according to river reach designations established by EPA.

In accordance with the Revised Final Permit, remediation activities are planned in Reaches 5 through 8, which are shown on Figure 1-2. The ROR Remedial Action includes remediation, as necessary, of sediments (including in backwaters), riverbank soils, and floodplain soils (including vernal pools) over an area covering approximately 30 river miles. Specifically, it includes active remediation of the following: (1) sediments in the river (including backwaters) within Reaches 5 through 8, with the exception of the flowing subreaches in Reach 7 (i.e., Reaches 7A, 7D, 7F, and 7H); (2) riverbank soils in Reaches 5A and 5B; and (3) floodplain soils (including vernal pools) in portions of Reaches 5 through 8 where necessary to meet certain Performance Standards.

The types of construction/remediation activities to be performed as part of the ROR Remedial Action will vary for the river reaches and subreaches and will include excavation of sediment, riverbank soils, and floodplain soils; capping of certain river sediments; post-excavation backfill placement; placement of sediment amendments in designated areas; construction of an on-site Upland Disposal Facility (UDF); and disposal of excavated soil and sediment in the UDF and at off-site disposal facilities. Based on the scale of the required remediation activities, the RD/RA process is anticipated to take a number of years to complete, as described 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.

As described in the Final Revised OSS, the ROR has been segmented into six separate Remediation Units (RUs) to manage the workflow and schedule in a phased approach. These RUs are Reach 5A, Reach 5B, Reach 5C, Reach 6 (Woods Pond), Reach 7, and Reach 8 (Rising Pond) and are shown on Figure 1-2. Remedial design and construction efforts will be conducted separately for each RU, although design and construction activities may be performed in more than one RU concurrently. Reach 5A is the first RU to be addressed because it is the most upstream reach in the ROR; and, as described in the Final Revised OSS, sediment removal in Reach 6 will be conducted in parallel with the Reach 5A remediation (including sediment removal and capping there) such that sediment removal in both reaches will be completed at approximately the same time.

On October 15, 2024, GE submitted a *Revised On-Site and Off-Site Transportation and Disposal Plan* (Revised T&D Plan; Arcadis 2024a), which describes GE's plans for the transportation and disposal of

excavated material from the ROR. As described in the Revised T&D Plan, three modes of transportation will be used for material transport during the ROR Remedial Action: hydraulic transport, truck transport, and rail/truck transport.² The Revised T&D Plan provides a detailed evaluation of these transport modes, including an evaluation of potential QOL impacts to the community related to air quality, noise, lighting, operating hours, infrastructure, recreation during construction, and recreation post-remediation (recreational enhancements). In addition, details regarding waste transport and disposal, including potential transportation routes and procedures and disposal procedures, both for disposal at the UDF and for off-site transport, are provided in the Revised T&D Plan. As provided in the Final Revised SOW, the final methods of transport and transportation routes to the UDF and to the selected off-site disposal facilities will be identified in the Final RD/RA Work Plan and Supplemental Information Package (SIP) for each of the RUs.

1.3 Plan Objective and Scope

The objective of this Revised QOL Compliance Plan is to describe how the following topics will be addressed during remediation:

- Coordination with local governments;
- Potential air quality, noise, odor, and lighting impacts through the establishment and implementation of QOL standards governing those impacts;
- Measures to address potential impacts on recreational activities;
- Road use, including restrictions on transportation of waste material on certain designated roads and methods to mitigate transportation-related impacts to certain neighborhoods, infrastructure, and the general public; and
- Community health and safety, including coordination with affected residents and landowners.

This Revised QOL Compliance Plan is a site-wide plan that defines the standards and measures that will be applied throughout the ROR Remedial Action. Details regarding potential QOL impacts resulting from the remediation, routine design control measures to be implemented to minimize those impacts, the approach to monitoring those impacts, and contingency methods to respond to such impacts during remediation (if necessary) will be developed during remedial design and provided in the Final RD/RA Work Plan and SIP for each of the RUs. In case of conflict between this

² As discussed in the Revised T&D Plan, use of rail as a mode of transportation will necessarily include use of trucks to convey material to the railroad and/or from the railroad to the final disposal site and is, therefore, referred to as a rail/truck transport approach.

Revised QOL Compliance Plan and the most current version of the *Project Operations Plan (POP)*, this Revised QOL Compliance Plan shall control.³

A central focus of this Revised QOL Compliance Plan is defining GE's proposed standards for air quality, noise, odor, and lighting to be implemented during the ROR Remedial Action. The final QOL standards will be incorporated into the remedial design and used to establish routine control measures, monitor the impacts of the remedial activities, and specify contingency response actions where necessary. An adaptive management approach will be implemented in achieving the QOL standards, such that modifications to control measures, remedial construction activities, and contingency response actions may be identified as the project proceeds, as described in GE's *Revised Adaptive Management Plan* submitted on June 24, 2024 (Anchor QEA 2024) and approved by EPA on November 1, 2024.

1.4 Plan Organization

The remainder of this Revised QOL Compliance Plan is organized into the following sections:

- Section 2 provides a high-level summary of the anticipated types of remedial activities that may be employed in Reaches 5 through 8.
- Section 3 describes GE's coordination and communication with local governments.
- Section 4 presents the proposed QOL standards for air quality, noise, odor, and lighting, as well as general routine control measures to mitigate such QOL impacts, compliance monitoring, potential contingency actions in the event of an exceedance, complaint management, and reporting.
- Section 5 addresses potential impacts of remediation activities on river and floodplain recreation and possible post-remediation recreational enhancements.
- Section 6 discusses the road usage during the remediation activities and includes the identification of measures to mitigate traffic impacts, monitoring of road conditions, and community coordination.
- Section 7 presents a community coordination and health and safety plan that includes a community education and notification program and a complaint management program that will be in place throughout the remediation activities.

³ GE submitted a revised POP to EPA on January 25, 2024. EPA provided conditional approval of that revised POP on July 22, 2024, directing GE to submit a further revised plan. That further revised POP is being submitted concurrently with this Revised QOL Compliance Plan on November 22, 2024 (Arcadis 2024b).

2 Description of Remedial Activities

Development of the QOL standards described in this plan and other described measures to address QOL impacts has required consideration of the general components, locations, and sequence of the planned remediation activities. In accordance with the Revised Final Permit, remediation activities are planned in Reaches 5 through 8, shown on Figure 1-2. Based on the scale of the required remediation activities, the RD/RA process is anticipated to take a number of years to complete and will include separate RD/RA Work Plans for each RU.

In accordance with the Revised Final Permit, the ROR Remedial Action activities will differ for each RU but will generally include the following:

- Constructing an on-site UDF;
- Constructing temporary access roads and staging/support areas;
- Excavating/dredging sediments from the river channel, backwater areas, and impoundments;
- Excavating soils from riverbank areas, vernal pools, and floodplain areas (on residential and non-residential properties);
- Processing and dewatering, as necessary, excavated/dredged sediment, soil, and debris prior to disposal;
- Treating water generated during sediment removal and/or processing operations;
- Transporting excavated/dredged material to the on-site UDF and to an off-site disposal facility(ies) in accordance with criteria specified in the Revised Final Permit;
- Obtaining and transporting imported backfill and cap material from nearby sources and staging such material at the project site;
- Capping sediments or backfilling, as applicable, in the river, backwater areas, and impoundments;
- Backfilling and restoring excavated riverbank areas, vernal pools, and floodplain areas;
- Installing riverbank stabilization measures, where appropriate;
- Placing amendments (e.g., activated carbon) in portions of the river, backwater areas, and vernal pools;
- Restoring habitat in accordance with project restoration plans; and
- Removing the Columbia Mill Dam and the former Eagle Mill Dam.

Section 3.2 of the Final Revised OSS provides descriptions of the planned RUs and a general overview of the sequence in which the remediation activities are anticipated to be performed.

Specific details 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 Conceptual RD/RA Work Plan, Final RD/RA Work Plan, and SIP for each RU.

Thus far, the *Conceptual Remedial Design/Remedial Action Work Plan for Reach 5A* (Anchor QEA et al. 2023) and *Conceptual Remedial Design/Remedial Action 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 work plans are currently under EPA review. Because those work plans were submitted prior to development of this Revised QOL Compliance Plan, RU-specific details regarding the potential QOL impacts, monitoring of such impacts, and routine and contingency measures to minimize or mitigate such impacts for Reach 5A and Reach 6 (beyond the more general discussions included herein) will be included in the Final RD/RA Work Plans and/or SIPs for those reaches. For the other RUs, specific details regarding those topics will be included in the Conceptual and Final RD/RA Work Plans and SIPs for those RUs.

Details related to the construction and operation of the UDF were presented in GE's February 2024 *Upland Disposal Facility Final Design Plan* (UDF Final Design Plan, Arcadis 2024c) and *Upland Disposal Facility Operation, Monitoring, and Maintenance Plan* (UDF OMM Plan, Arcadis 2024d), which were both conditionally approved by EPA on September 12, 2024. Based on EPA's conditional approvals, GE will submit revised versions of those plans to EPA by December 20, 2024, along with an addendum to the Revised UDF Final Design Plan that provides details regarding the conceptual design and location of the on-site dewatering and water treatment systems at the UDF and another addendum that proposes treatability studies to support the design of those systems. Details regarding the potential QOL impacts, monitoring of such impacts, and routine and contingency measures to minimize or mitigate such impacts during UDF construction and operations (beyond the more general discussions included herein) will be described in the Revised UDF OMM Plan and/or in the UDF SIP.

3 Coordination with Local Governments

During the planning and implementation of the ROR Remedial Action, GE will coordinate with local municipalities, including the City of Pittsfield and the Towns of Lenox, Lee, Stockbridge, and Great Barrington, on potential issues affecting those municipalities.⁴ GE's project management structure and general communications approach are described in Section 2 of the Final Revised OSS.

Periodic meetings and conference calls among GE, EPA, and the local municipalities listed above will be scheduled to discuss the status of and updates related to the remediation activities as they pertain to those communities and to discuss issues that may affect the municipalities' constituencies, as well as other pertinent project-related issues. GE and EPA will coordinate with the other entities to schedule such meetings and conference calls.

In general, coordination with local governments will occur during the planning, design, and construction phases to notify them of and to discuss potential issues that may affect their local communities. Issues that are anticipated to require coordination with local governments include the locations and schedule of the remedial construction work and traffic routes. In addition, GE will coordinate with local governments to gather information to support the design and construction. For example, local government input will be required at various phases of the project related to the protection of public utilities and access to public lands.

Topic-specific meetings with relevant local governments (and the public as appropriate) are anticipated at various phases of the remediation. For example, GE previously participated in meetings with local governments during development of the Revised T&D Plan submitted to EPA on October 15, 2024, and will participate in a public meeting scheduled for December 4, 2024, regarding that revised plan. Additional meetings are anticipated during development of future RU-specific RD/RA work plans. In addition, during the construction phase, GE anticipates that meetings will be held with EPA and local government officials to discuss the schedule and progress of the work and to discuss issues affecting implementation and other key issues.

GE will also continue to perform the public outreach activities required by the Revised Final Permit, including, but not limited to, outreach associated with biota consumption advisories and water withdrawals and uses.

Discussion of coordination efforts with local governments regarding river and floodplain recreational activities and regarding road usage is provided in Sections 5 and 6, respectively. In addition, a discussion of coordination with affected residents or landowners at or near the remediation areas is included in Section 7.

⁴ A discussion of coordination with local communities and affected residents and landowners is included in Section 7 of this Revised QOL Compliance Plan.

4 Quality of Life Standards

The QOL standards presented in this plan have been established to guide remediation efforts toward an efficient and successful completion while minimizing and mitigating the potential impacts to the community to the extent practicable. The QOL standards for the Housatonic ROR were developed for air quality, noise, odor, and lighting, as required by Section II.H.11.a of the Revised Final Permit.

This section describes the overall approach and development of the QOL standards; routine control actions to be included in the design to achieve those standards; monitoring to verify compliance with the QOL standards; possible contingency actions to be taken if the numerical QOL standards are exceeded; actions to be taken to address complaints from the local community related to QOL issues; and the reporting and notification process. The discussion in this section will be augmented in subsequent Final RD/RA Work Plans and, if appropriate, SIPs for the various RUs to include further details regarding potential QOL impacts of remediation, monitoring of such impacts, and methods to minimize and mitigate such impacts.

An adaptive management approach will be implemented with respect to compliance with the QOL standards and associated mitigative measures, as outlined in GE's *Revised Adaptive Management Plan* (Anchor QEA 2024).

4.1 Overall Approach

The overall approach to developing and complying with the QOL standards is as follows:

- Develop QOL standards (including both quantitative and qualitative standards) that are protective and appropriate for the remediation activities.
- Implement routine control measures and supplemental control measures, as needed, to attain the applicable QOL standards.
- Conduct monitoring during the remediation activities, as well as supplemental monitoring as necessary in response to complaints regarding QOL impacts, to assess whether the project is meeting the applicable quantitative QOL standards.
- If monitoring results indicate exceedance of a quantitative standard, investigate to determine whether the exceedance is related to the project.
- Establish a process for investigating and responding to complaints regarding the subjects of the QOL standards.
- Evaluate and implement engineering controls, operational adjustments, or other contingency measures in the following circumstances: (1) if there is an exceedance of a quantitative QOL standard; (2) if there is a failure to meet a qualitative QOL standard; or (3) where appropriate in response to complaints.

The following subsections describe this approach for each of the QOL standards.

4.2 Development of QOL Standards

The subsections below describe the QOL standards for air quality, noise, odor, and lighting. Some of those standards are quantitative numerical standards (air quality and noise), and some are more qualitative (odor and lighting). The standards described herein will be applicable throughout the remediation process in Reaches 5A through 8. This plan discusses possible impacts and efforts to mitigate impacts in general terms; the subsequent Final RD/RA Work Plans and SIPs for the RUs will include details about the potential impacts of remediation and methods to minimize or mitigate such impacts. The discussion in this section also applies to the construction and operation of the UDF, with additional details to be provided in the forthcoming Revised UDF Final Design Plan and/or the Revised UDF OMM Plan or in addenda to those plans or in the UDF SIP, as appropriate.

4.3 Air Quality QOL Standards

The primary objective of the air quality QOL standards is to minimize adverse impacts of air emissions from project activities on ambient air quality in the ROR project area. During the remediation project, sediment and soil removal, staging, and handling activities could result in the generation of airborne particulates (i.e., dust) or PCB emissions. Once emitted, the particulates and PCB emissions could disperse in the atmosphere as they move with air currents. To monitor the generation and potential migration (via wind) of such particulates and, in some cases, airborne PCBs, GE will conduct an ambient air monitoring program to assess potential impacts to ambient air during the remediation activities and determine whether further control measures are needed.

The following subsections describe the proposed air quality QOL standards and discuss the routine control measures, monitoring, compliance, and potential contingency response actions associated with these standards.

4.3.1 *Development of Air Quality QOL Standards*

Air quality standards from similar remediation projects were reviewed and considered for their applicability to the ROR project. The most applicable air quality standards are those used in prior remediation actions at the Site. The selected performance standards for air quality are the same as those established by EPA and used by GE for prior Removal Actions at this Site including the Upper ½-Mile Reach Removal Action, the Removal Actions for floodplain properties, and the Removal Actions for Areas Outside the River and also used by EPA for the 1½-Mile Reach Removal Action. The air quality QOL standards will consist of a particulate standard and a PCB standard, as summarized in Sections 4.3.1.1 and 4.3.1.2, respectively. These air quality standards were previously incorporated in the *Ambient Air Monitoring Plan* (AAMP) included in GE's January 2024 POP, and they are also incorporated in the revised AAMP included in the revised POP being submitted to EPA

on November 22, 2024, concurrently with this Revised QOL Compliance Plan. (That updated AAMP is referred to herein as “the revised AAMP.”)

Consistent with prior Removal Actions at this Site, Notification Levels and Action Levels will be used for both particulate monitoring and PCB monitoring. The Notification Levels will be utilized to assess site conditions and implement corrective actions to avoid exceedance of the Action Levels.

In addition, as described in Section 4.3.1.3, a qualitative standard has been developed for the ROR Remedial Action to address observations of visible dust leaving the immediate work area and caused by the remediation.

4.3.1.1 Air Quality QOL Standard for Particulate Matter

The QOL standard for particulate matter will apply to particulates smaller than 10 micrometers in diameter (PM₁₀) and includes both a Notification Level and an Action Level. The Notification Level will be a 10-hour average PM₁₀ concentration of 120 micrograms (µg) per cubic meter (m³), which represents 80% of the current 24-hour National Ambient Air Quality Standard (NAAQS) of 150 µg/m³ for PM₁₀. The Action Level for particulate matter will be a 10-hour average PM₁₀ concentration of 150 µg/m³ (i.e., equivalent to the level of the 24-hour NAAQS). These Notification and Action Levels are the same as those previously established or approved by EPA and used for prior Removal Actions at this Site. Table 4-1 summarizes the air quality QOL standard for PM₁₀.

**Table 4-1
Air Quality QOL Standard for Particulate Matter (as PM₁₀)**

Type	Averaging Period	Numerical Standard
Notification Level	Minimum 10-hour average, ¹ total PM ₁₀	120 µg/m ³
Action Level	Minimum 10-hour average, ¹ total PM ₁₀	150 µg/m ³

Note:

1. PM₁₀ monitoring will occur for a minimum of 10 hours when construction is ongoing and throughout the duration of construction activities. 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 PM₁₀ Notification Level and Action Level.

4.3.1.2 Air Quality QOL Standard for PCBs

Like the particulate standard, the QOL standard for PCBs includes both a Notification Level and an Action Level for total PCB concentrations. The Notification Level is 0.05 µg/m³ based on a 24-hour average, and the Action Level is 0.1 µg/m³ based on a 24-hour average. EPA has established these Notification and Action Levels for PCBs in air, 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 Attachment A to this plan.

These Notification and Action Levels are the same as those previously established by EPA and used for prior Removal Actions at this Site. Table 4-2 summarizes the air quality QOL standard for PCBs.⁵

**Table 4-2
Air Quality QOL Standard for PCBs**

Type	Averaging Period	Numerical Standard
Notification Level	24-hour average, total PCBs	0.05 µg/m ³
Action Level	24-hour average, total PCBs	0.1 µg/m ³

4.3.1.3 Air Quality QOL Standard for Visible Dust

In addition to the quantitative standards presented in Sections 4.3.1.1 and 4.3.1.2, a qualitative QOL standard for visible dust will be used for the ROR remediation. If observations of project-related visible dust leaving the work area are made by GE’s construction quality assurance representatives or if GE is notified of such observations by EPA representatives or other parties, the observations will be documented, including the work activities being implemented and the time and duration of the observations. Further, in the case of such observations, GE will investigate the cause of the visible dust, and the appropriate particulate monitors will be checked as soon as possible after the visible 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 4.3.4.

4.3.2 Routine Control Measures

During the implementation of the remediation activities, as well as waste handling and disposal activities at the UDF, the remediation contractor(s) will implement routine control measures and best management practices (BMPs) to control dust and PCB air emissions. 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 will be identified in the Revised UDF OMM Plan and/or the UDF SIP. It is anticipated that these measures will include, but may not be limited to, dust suppression measures, such as applying a water spray to unpaved haul roads and material staging piles (both at temporary staging areas and at rail loading/unloading areas), using covers on trucks hauling remediation waste and trucks carrying imported backfill/cap materials, and preventing tracking of soils onto haul roads.

⁵ For comparison, the PCB air quality standard established by EPA for GE’s Upper Hudson River dredging project was a 24-hour average of 0.11 µg/m³ in residential areas.

4.3.3 Monitoring, Compliance, and Reporting

Ambient air monitoring will be conducted during the remediation activities to demonstrate compliance with the air quality standards presented in Section 4.3.1, including monitoring for PM₁₀ and PCBs during active sediment and soil removal, staging, and handling activities. 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 PM₁₀. However, monitoring for both PM₁₀ and PCBs will be conducted during operation and closure of the UDF.⁶

The procedures for ambient air monitoring for particulate matter and PCBs, including sampling and analytical procedures, will follow those specified in Appendix G (Standard Operating Procedure for Ambient Air Monitoring for Particulate Matter and Polychlorinated Biphenyls) 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.

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. The compliance point for attainment of the air standards will be at the closest receptor, which will vary based on the location of the active work. However, monitoring data collected closer to the source that meet the standards will be considered to show attainment. It is anticipated that, during active work activities, ambient air monitoring will be performed at a minimum of three locations around the work area, including downwind and upwind locations. Specific locations for these stations will be identified on an RU-specific basis in the associated RD/RA work plans or SIPs for the RUs and, for the UDF, in the Revised UDF OMM Plan. A description of how the air monitoring locations will be determined is included in the revised AAMP. In general, it is anticipated that 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. As noted in the revised AAMP, the locations of monitoring stations will consider the location of potential receptors, prevailing wind direction, forecasted wind direction, wind speed, site accessibility, site security, and any existing ambient air monitoring data. The RU-specific plans will include additional work area-specific criteria (e.g., local geography, receptor locations) that will be used to determine air quality monitoring locations.

⁶ Post-construction air monitoring for both the RUs and the UDF is not described herein. It 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 SOW.

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 quality assurance/quality control (i.e., obtaining field duplicate samples).

In conjunction with the ambient air monitoring, 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 evaluation and understanding of the air monitoring results. The location(s) of the meteorological station(s) will depend on the location(s) of construction activities 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 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 or the Revised UDF OMM Plan).

PM₁₀ monitoring will be conducted daily for a minimum of 10 hours when construction (including sediment removal) 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. For particulate monitoring during sediment removal activities conducted under wet conditions (e.g., wet excavation, hydraulic dredging), if the results of such monitoring during the initial two weeks of that activity indicate PM₁₀ levels are below the Notification Level, GE will propose to EPA that the PM₁₀ monitoring frequency be reduced or terminated during the remainder of that activity.

The air monitoring will be conducted using real-time airborne particulate monitors with dataloggers, as described in Appendix G to the latest revised FSP/QAPP, to obtain continuous readings for determining the work-day average concentration for comparison with the particulate standards. Data from the meters will be downloaded daily or otherwise transmitted to the monitoring team. The monitors will be equipped with alarms that will indicate whether concentrations exceed the Notification Level. As noted in Section 4.3.1.3, if visible dust is observed leaving the work area, the appropriate monitors will be checked as soon as possible after the dust has been observed.

As described in Section 2.4 of the revised AAMP, 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. Baseline monitoring locations 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 for PCBs at baseline monitoring locations will be 24 hours in duration. The baseline monitoring data will be used, where appropriate, during the ROR Remedial Action 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.

During construction, PCB monitoring will initially be performed in the vicinity of potential sources of PCB emissions for two sequential 24-hour periods (i.e., two back-to-back daily events) at the start of each new type of construction activity in each construction season to confirm that representative airborne concentrations for PCBs do not exceed the designated standards. The PCB monitoring will be performed using continuous 24-hour air samplers, as described in Appendix G to the latest revised FSP/QAPP. 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, 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.⁸ If the initial PCB monitoring indicates that air PCB levels are acceptable, one 24-hour monitoring event will then be conducted weekly for each area of active construction for the duration of that construction activity. In addition, monitoring will be reinstated when a new type of remediation activity occurs in an area.

It is anticipated that PCB sample results will normally be available within 10 business days after sample collection. The actual turnaround time will be dependent on the time required to transport samples from the Site to the selected laboratory(ies) (via commercial carrier or courier service) and analytical laboratory sample preparation and analytical testing duration.

The air quality monitoring program is described further in the revised AAMP included in the revised POP. If the measured PM₁₀ or airborne PCB concentrations exceed the Notification or Action Level described in Section 4.3.1, GE will take the actions described in the following subsections, as applicable. In the event of an air quality complaint, GE will follow the process specified for the complaint management program in Section 7.2.3 of this Revised QOL Compliance Plan. Specifically, in such a case, GE will investigate whether the complaint is related to the project. If so, GE will review the monitoring data to determine whether the Notification or Action Level has been exceeded and, if so, will conduct the appropriate actions described in the following subsections. If there was no exceedance of those levels, GE will evaluate potential mitigation measures to address the complaint, and if mitigation measures are possible and GE and EPA agree, GE will implement such measures.

4.3.3.1 Actions in Event of a Notification Level Exceedance

For particulates, monitoring data on PM₁₀ 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 remediation or waste disposal/handling activities, the particulate data from the downwind monitors will be compared with the Notification Level. GE will

⁸ 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.

utilize a PM₁₀ monitoring alarm notification system that is triggered by an exceedance of the PM₁₀ Notification Level. If the work-day average (minimum 10-hour average) PM₁₀ 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 4.3.4. 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 assess 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 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 4.3.4. In addition, GE will provide written notice of the exceedance to EPA within 72 hours following receipt of the data showing the exceedance.

4.3.3.2 Actions in Event of an Action Level Exceedance

In the event that the work-day average (minimum 10-hour average) PM₁₀ Action Level is exceeded on two consecutive days or any 24-hour average PCB concentration exceeds the PCB Action Level, GE will take the following actions (regardless of any comparison of the results at upwind and downwind monitors). 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 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 4.3.4.

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 PM₁₀ or PCBs, GE will provide written notice to EPA within 72 hours following receipt of the data showing the exceedance.

4.3.3.3 Other Evaluations

In addition to the results of air monitoring, other observations of conditions that could cause project-related QOL issues or complaints or result in an exceedance of the QOL standards (e.g., exceedances of the visible dust standard due to remediation activities) will trigger an evaluation of whether additional mitigation measures or BMPs, such as those listed in Section 4.3.4, should be implemented to address such observations and mitigate the potential for exceedances of QOL standards.

4.3.4 *Potential Contingency Response Actions and Mitigation Measures*

In the event of an exceedance of an air quality 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 actions will be determined on a case-by-case basis. In addition to the routine operational controls and BMPs discussed in Section 4.3.2, GE may consider the following measures, or other as-yet-unidentified measures, both for remediation areas and for support areas (i.e., access roads, temporary staging areas, and rail loading/unloading areas), 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;
- Reducing the speed at which material-handling equipment is operated;
- 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;
- 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 truck beds 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, and/or reducing the laboratory turnaround time for PCBs).

Where prior EPA approval of additional mitigation measures is not required, GE will consult with EPA (if there is time to do so) prior to implementing such additional response actions or additional mitigation measures. If time-critical actions are needed, GE will consult with EPA as soon as practicable after implementing such actions.

4.4 Noise QOL Standards

During implementation of the ROR Remedial Action, large construction equipment and operations, along with trucks and rail cars, will be used to conduct remediation and transportation activities required by the Revised Final Permit, as well as construction and operation of the UDF. The use of such construction equipment, construction operations, trucks, and rail cars will inevitably generate noise. Noise levels will vary based on the type of activity being performed and the equipment necessary to complete the work. Figure 4-1 illustrates examples of anticipated ROR construction-related noise levels compared to common noise levels.⁹

The primary objective of the noise QOL standards is to limit potential impacts of noise generated by the project on the surrounding communities. It is expected that most of the ROR Remedial Action work will be conducted between 7:00 a.m. and 9:00 p.m. on weekdays, except for hydraulic dredging and pumping (which may run continuously). Under certain circumstances, some remedial work activities may be conducted during overnight hours (i.e., between 9:00 p.m. and 7:00 a.m.) or on weekends.¹⁰ GE will obtain EPA approval prior to working before 7:00 a.m. or after 9:00 p.m. or on weekends or state or federal holidays, except in the case of emergencies, in which case EPA will be notified of such work as soon as practicable.

If work is conducted during the night, that work will be required to meet a stricter noise standard in residential areas, as described in Section 4.4.1, and noise monitoring will be performed to verify compliance with the standard.

⁹ The common noise levels shown on this figure include those that were compiled in Table 4-11 of the Revised T&D Plan.

¹⁰ Details regarding the construction schedule for each RU will be provided in the Final RD/RA Work Plan and/or SIP for each RU.

The following subsections describe the proposed noise QOL standards and discuss the routine control measures, monitoring, compliance, and potential contingency response associated with the standards.

4.4.1 Development of Noise QOL Standards

Noise performance standards from similar remediation projects were reviewed and considered for their applicability to the ROR project. Based on this review, separate noise QOL standards were established for residential areas and non-residential areas (e.g., commercial, industrial, agricultural, and undeveloped areas). The Final RD/RA Work Plan for each RU will include RU-specific maps that show residential and non-residential receptors near the remediation areas along with the proposed monitoring locations. The residential and non-residential receptors will be designated based on municipal tax parcel information.

For residential areas, separate numerical QOL standards have been established for daytime and nighttime periods. The residential daytime QOL standard includes both a Notification Level and an Action Level. The residential nighttime noise standard and non-residential noise standard (applicable any time of day) are both Action Levels. The residential daytime Notification Level will establish the threshold at which GE will evaluate whether mitigation is appropriate, and the Action Levels are levels at which noise mitigation is required as described in Section 4.4.3.

The residential daytime Notification Level for noise (applicable from 7:00 a.m. until 9:00 p.m.) is a maximum hourly average of 75 A-weighted decibels (dBA). The residential daytime Action Level standard for noise (likewise applicable from 7:00 a.m. until 9:00 p.m.) and the non-residential noise Action Level (applicable any time of day) are both a maximum hourly average of 80 dBA. The residential nighttime noise Action Level (applicable from 9:00 p.m. until 7:00 a.m.) is a maximum hourly average of 65 dBA.¹¹ These standards are consistent with those established by EPA for other large remediation projects in the Northeastern United States (e.g., those at the Upper Hudson River and the Grasse River). Table 4-3 summarizes the noise QOL standards.¹²

¹¹ When nighttime work occurs in an area adjacent to both residential and non-residential receptors, the residential nighttime noise standard will apply.

¹² At EPA's request, noise ordinances in the municipalities in which active remediation will occur as part of the ROR Remedial Action are listed in Attachment B for informational purpose, although, in accordance with the CD, compliance with these ordinances is not required for the on-site activities that comprise this Remedial Action.

**Table 4-3
Noise QOL Standards**

Type	Numerical Standard (Maximum Hourly Average)
Notification Level: Residential Daytime (7:00 a.m. to 9:00 p.m.)	75 dBA
Action Level: Residential Daytime (7:00 a.m. to 9:00 p.m.)	80 dBA
Action Level: Residential Nighttime (9:00 p.m. to 7:00 a.m.)	65 dBA
Action Level: Non-Residential (Day or Night)	80 dBA

4.4.2 Routine Control Measures

During implementation of the remediation activities, the remediation contractor(s) will be responsible for implementing routine control measures and BMPs to control noise impacts. Specific control measures and BMPs will be identified in the Final RD/RA Work Plan and/or the SIP for each RU, and those for the UDF will be identified in the Revised UDF OMM Plan and/or the UDF SIP. Such control measures and BMPs to minimize noise impacts may include using shrouds, barriers, or other sound-attenuating walls around stationary equipment (e.g., generators and booster pumps) or between noise sources and receptors; avoiding construction operations near receptors during earlier morning or nighttime hours; controlling the speed at which material-handling equipment is operated; using electric- or battery-powered vehicles or equipment where practicable;¹³ and using quieter backup alarms on certain construction equipment that frequently operates in reverse (e.g., front-end loaders and dump trucks). These control measures will also apply to equipment handling and transporting remediation waste, such as trucks and equipment for loading and/or unloading rail containers.

When work activities are being performed during overnight hours (i.e., between 9:00 p.m. and 7:00 a.m.) near residential receptors, work activities that generate or have the potential to generate loud or disruptive noise will be minimized to the extent practicable, except where necessary to address an emergency condition. For example, loud equipment operation, sheet pile driving, and stone material handling will not be conducted when working near residential receptors during overnight hours.

¹³ The market for electric- and battery-powered vehicles and/or equipment as well as necessary charging infrastructure is currently evolving. The use of electric- and battery-powered vehicles and/or equipment will be evaluated as the project advances and will be considered where practicable and appropriate. GE will discuss with electricity providers in the area electrical connections that could be used during the cleanup remedy to promote the use of electric equipment.

4.4.3 *Monitoring, Compliance, and Reporting*

Compliance with the noise QOL standards presented in Section 4.4.1 will be determined based on noise monitoring conducted at representative locations near the closest receptor to the work activities or between the active work areas and the closest receptor. The compliance point for attainment of the noise standards will be at the receptor. However, monitored noise levels closer to the source that meet the noise standards will be considered to show attainment.

Noise monitoring will be conducted initially at the start of a new type of construction activity in each construction season to assess representative noise levels and confirm that the noise levels do not exceed the designated standards. This initial noise monitoring will be conducted on a day that is representative of full-scale operations in a given area (as opposed to the first day of *any* operations in the area). The monitoring will be conducted using a sound-level meter to measure levels between the construction activities and the nearest receptor(s). Initial noise monitoring will be continuous during hours of operation so that one-hour averages can be computed across the entire construction day as activities will likely vary throughout the day. If work is conducted during the night, the initial monitoring will be conducted over a 24-hour period. Noise monitoring locations will be selected to monitor noise at the following locations: (1) active sediment, riverbank, and floodplain remediation areas in close proximity to receptors; (2) temporary material staging areas; (3) the UDF area; and (4) rail loading and unloading areas. Additional details regarding the noise monitoring equipment and procedures for the initial monitoring are presented in the revised Construction Monitoring Plan that is Appendix G to the revised POP submitted on November 22, 2024. Specific noise monitoring locations will be identified for each RU in the Final RD/RA Work Plan or SIP for that RU and for the UDF area in the Revised UDF OMM Plan.

If the initial monitoring indicates that noise levels are acceptable, subsequent monitoring will occur as follows: (1) monthly for each type of construction activity to verify noise levels; (2) when a new remediation activity, equipment, or reduced distance to receptors has the potential to increase noise levels; (3) if work hours are extended to the nighttime period (i.e., between 9:00 p.m. and 7:00 a.m.); and (4) in response to noise complaints. Like the initial monitoring, this subsequent monitoring will be continuous during hours of operation so that one-hour averages can be computed across the entire construction day.

If measured noise levels exceed the residential daytime Notification Level presented in Section 4.4.1, GE will evaluate the cause of the exceedance, determine whether it is project-related, and evaluate whether mitigation is appropriate to prevent an exceedance of the residential daytime Action Level. If appropriate for that purpose, GE will propose to EPA suitable mitigation measures. The actions to be considered in such circumstances include the types of measures described in Section 4.4.4.

If measured noise levels exceed the Action Levels presented in Section 4.4.1, GE will provide notice to EPA as soon as practicable, but no later than 24 hours after receipt of the data showing the exceedance, and will provide written notice of the exceedance to EPA within 72 hours following receipt of the data showing the exceedance. In addition, GE will evaluate the cause of the exceedance and determine whether it is project-related and, if so, the appropriate additional engineering or operational controls. GE will discuss that evaluation with EPA and propose to EPA appropriate response actions or mitigation measures to address the exceedance. The actions to be considered in such circumstances include the types of measures described in Section 4.4.4.

In the event of a noise complaint, GE will follow the complaint management program described in Section 7.2.3. Specifically, in such a case, GE will investigate whether the complaint is related to the project. If so, GE will review monitoring records or conduct monitoring to determine whether an applicable standard has been exceeded and, if so, will conduct appropriate mitigation, as discussed in Section 4.4.4. If there is no exceedance of the noise standards, GE will still evaluate potential mitigation measures to address the complaint and, if mitigation measures are possible and GE and EPA agree, will implement such measures.

4.4.4 Potential Contingency Response Actions and Mitigation Measures

As discussed in the prior section, in the event of an exceedance of the residential daytime Notification Level, GE will evaluate the need for additional response actions or mitigation measures to prevent an exceedance of the Action Level. In the event of an exceedance of an Action Level, GE will implement additional response actions or mitigation measures to address that exceedance. Selection of specific response actions will be determined on a case-by-case basis. In addition to the routine operational controls and BMPs discussed in Section 4.4.2, GE may consider the following measures, or other as-yet-unidentified measures, both for remediation areas and for support areas (i.e., access roads, temporary staging areas, and rail loading/unloading areas), depending on the specific cause of the exceedance:

- Conducting monitoring at a location closer to the nearest receptor(s) to assess attainment of the standard;
- Using shrouds or noise-dampening devices on or around equipment;
- Using alternative equipment at certain times of the day or night;
- Repairing or replacing stationary pieces of equipment found to be operating outside of their parameters (if any);
- Placing barriers around the noise sources or between the noise sources and receptors, where practicable, to block or reduce sound propagation;
- Installing noise-deadening construction materials to line staging areas or transport containers;

- Reducing the speed at which material-handling equipment is operated;
- Retrofitting equipment with quieter backup alarms;
- Installing or replacing noise mufflers on engines if compatible with manufacturers' recommendations;
- Using distance and natural or artificial features to attenuate noise;
- Placing operating restrictions on equipment, as appropriate;
- Making operational adjustments, including sequencing of pertinent operations, use of specific travel routes, and modification of normal backup locations; and/or
- Adjusting noise monitoring procedures if necessary going forward (e.g., establishing additional monitoring locations and/or increasing the frequency of monitoring).

4.5 Odor QOL Standard

The primary objective of the odor QOL standard is to protect the surrounding communities from nuisance odors that unreasonably interfere with the comfortable enjoyment of life and property or the conduct of business. The following subsections describe the proposed odor QOL standard and discuss the routine control measures, investigations, monitoring, compliance, and potential contingency response actions associated with the standard.

4.5.1 *Development of Odor QOL Standard*

Based on experience from other PCB remediation projects, odors are not expected to be a significant concern during the ROR Remedial Action because PCBs are odorless. However, odor generation associated with the management of sediments is a potential nuisance concern due to decaying organic matter (e.g., aquatic plants and other organisms) within sediments that, when exposed to air, could produce detectable odors and create a negative public reaction. These types of odors are typically controlled using BMPs, which include prevention by collecting and properly disposing of organic matter before it decays. Given the various types and sources of odors, none of the prior remediation projects conducted at the Site (i.e., the Upper ½-Mile Reach Removal Action, the 1½-Mile Reach Removal Action, the floodplain-related Removal Actions, or the Removal Actions for Areas Outside the River) had a specific numerical standard for odors.

In this situation, for odors generally, the odor standard for the ROR Remedial Action will be to mitigate the presence of uncomfortable project-related odors identified by project workers, GE, or EPA or via an odor complaint from the public. Although each odor complaint will be investigated, the standard will be considered to be not met if uncomfortable project-related odors are identified frequently and recurrently or if such objectionable odors are not mitigated in a timely manner.

In addition, as directed by EPA in its July 22, 2024 conditional approval letter, GE has adopted a numerical QOL standard for one specific potential odor, hydrogen sulfide, which is caused by decay of organic material and can be evident when river sediments undergoing anaerobic decomposition are exposed to the air. Hydrogen sulfide has a distinct smell that resembles rotten eggs. Hydrogen sulfide can be detected by humans at concentrations much lower than those that would result in health impacts. The numerical QOL standard for hydrogen sulfide odor, which will be triggered in the event that a complaint or report is received from a worker, the public, or EPA that is related to the distinct rotten-egg smell of hydrogen sulfide, is a one-hour average concentration of 0.01 part per million (ppm) (or 14 $\mu\text{g}/\text{m}^3$), which is the level of distant odor awareness (LOA).¹⁴ This level was established to protect the public from the discomfort of disagreeable odors and, therefore, represents a reasonable threshold for evaluating hydrogen sulfide odors. This is the same odor performance standard for hydrogen sulfide that EPA established for the Hudson River dredging project (EPA and USACE 2004).¹⁵

4.5.2 *Routine Control Measures*

During implementation of the remediation activities, the remediation contractor(s) will be responsible for implementing routine control measures and BMPs to control objectionable odors to the extent practicable. Specific control measures and BMPs will be identified in the Final RD/RA Work Plan and/or the SIP for each RU, and those for the UDF will be identified in the Revised UDF OMM Plan and/or the UDF SIP. Such control measures and BMPs to minimize objectionable odors may include special handling for removed aquatic vegetation and organic debris that exhibits an offensive odor and disposing of such material as quickly as practicable.

4.5.3 *Investigation, Monitoring, Compliance, and Reporting*

If project workers, GE, or EPA identify an objectionable odor or if an odor complaint is received from the public, GE will investigate the presence and source of the odor to determine whether the odor is related to the remediation project. If multiple odor reports or complaints are received regarding the same potential odor source, they will be investigated together.

Specifically, in each such case, GE will document the odor report or complaint, evaluate the source of the odor to determine whether it is project-related, and notify EPA within 24 hours of receiving the report or complaint. For complaints, GE will implement the complaint management program described in Section 7.2.3. If the odor is project-related, GE will further discuss the nature and

¹⁴ The hydrogen sulfide LOA was derived in Appendix 4 of the *Acute Exposure Guideline Levels for Selected Airborne Chemicals, Volume 9* (National Research Council 2010).

¹⁵ There is no national ambient air standard for hydrogen sulfide. The Massachusetts ambient air toxic standard for hydrogen sulfide—a 24-hour average concentration of 2 $\mu\text{g}/\text{m}^3$ —which is Threshold Effects Exposure Level, is based on health, rather than odor. A QOL standard for odor needs to be based on a much shorter averaging time, such as the one-hour standard proposed for the ROR Remedial Action.

intensity of the odor with EPA and the person making the report or complaint and, if necessary and possible, obtain an objective assessment of odor intensity. If a project-related odor is determined to be uncomfortable or a nuisance, GE will propose and implement mitigation measures as appropriate to reduce or eliminate the source of the odor. The actions to be considered in such circumstances include the types of measures described in Section 4.5.4.

In the specific event that an odor complaint or report is received that relates to the distinct rotten-egg smell of hydrogen sulfide, GE will conduct air monitoring for that constituent at the work area perimeter for approximately one hour. The hydrogen sulfide monitoring equipment and procedures are described in the revised Construction Monitoring Plan that is Appendix G to the revised POP submitted on November 22, 2024. If the resulting one-hour-average concentration exceeds the 0.01 ppm standard, GE will notify EPA within 24 hours after receipt of the analytical data, provide written notice of the exceedance to EPA within 72 hours, investigate the cause of the exceedance, and propose mitigation measures, including, as appropriate, those identified in Section 4.5.4. However, even if the measured one-hour average hydrogen sulfide concentration is less than 0.01 ppm, GE will follow the procedures described above for any odor complaint—i.e., determine whether the odor is project related and, if so and if the odor is determined to be uncomfortable or a nuisance, propose and implement mitigation measures.

In any case, GE will notify the person who made the report or complaint of the steps taken to resolve the complaint in accordance with the complaint management program described in Section 7.2.

4.5.4 Potential Contingency Response Actions and Mitigation Measures

If mitigation measures are deemed necessary to address an odor report or complaint, GE will implement such measures as appropriate. Selection of specific response actions will be determined on a case-by-case basis. In addition to the routine operational controls and BMPs described in Section 4.5.2, GE may consider the following or other as-yet-unidentified measures, depending on the specific cause of the odor:

- Adjusting handling procedures for, or moisture content of, removed sediments, soils, and/or debris;
- Separating debris that exhibits an offensive odor (e.g., aquatic vegetation, wood, organisms, and other types of organic material associated with sediment removal operations) and disposing of the material as quickly as practicable;
- Applying a spray-on cover or otherwise covering staging areas piles if offensive odors are encountered prior to transportation for disposal;
- Applying a foam agent (if determined to be compatible with the treatment system) to cover materials or a chemical agent that will neutralize the odor; and/or

- Relocating piles of dredged material to other areas as appropriate.

4.6 Lighting QOL Standard

During the ROR Remedial Action, some work activities will likely be necessary before dawn or after dusk in the remediation project area and/or at the UDF or, in some cases, during overnight hours.¹⁶ During times of low light or poor visibility, artificial lighting will be used to illuminate work areas and protect worker safety. Lighting will also be needed on equipment, vehicles, and vessels to ensure their safe passage during low-light conditions. Lighting will be required for safe operations in accordance with Occupational Safety and Health Administration (OSHA) and U.S. Coast Guard (USCG) regulations, as applicable. At the UDF area and temporary staging areas, fixed lighting will be used to safely illuminate the work area(s) and access ways.

The primary objective of the lighting QOL standard is to limit potential nuisance impacts of lighting generated by project activities on nearby residents or the surrounding community. The following subsections describe the proposed lighting QOL standard and discuss the routine control measures, investigations, compliance, and potential contingency response actions associated with the standards.

4.6.1 *Development of Lighting QOL Standard*

Experience related to addressing lighting impacts at other remediation projects was reviewed and considered for their applicability to the ROR project. None of the prior remediation projects at this Site (i.e., Upper ½-Mile Reach Removal Action, the 1½-Mile Reach Removal Action, the floodplain-related Removal Actions, or the Removal Actions for Areas Outside the River) had a numerical standard for lighting. Additionally, lighting was not determined to be a significant issue on other large sediment remediation projects in the Northeastern United States with 24-hour operations (e.g., the Upper Hudson River or the Grasse River). However, light pollution caused by excessive, improperly shielded, and misdirected lighting can be a nuisance for adjacent residents.

The lighting standard for the ROR Remedial Action will be to mitigate nuisance project-related lighting impacts based on any complaints from nearby receptors. Although each lighting complaint will be investigated, the standard will be considered to be not met if frequent, recurrent lighting complaints related to project activities occur or if project-related nuisance lighting impacts are not

¹⁶ As noted in Section 4.4, while most of the ROR remediation work will be conducted between 7:00 a.m. and 9:00 p.m. (except for hydraulic dredging and pumping, which may run continuously), some work activities may be necessary during overnight hours. GE will obtain EPA approval prior to working before 7:00 a.m. or after 9:00 p.m., except in the case of emergencies, in which case EPA will be notified of such work as soon as practicable.

mitigated in a timely manner. However, this lighting standard will not supersede worker health and safety lighting requirements established by OSHA or USCG.¹⁷

4.6.2 Routine Control Measures

For the ROR Remedial Action, sufficient lighting will be supplied to provide safe conditions during low-light and nighttime operations, including compliance with applicable regulations set forth by OSHA and USCG. This will include fixed lighting at the UDF area, temporary staging areas, and rail loading/unloading areas. While low-light and nighttime lighting requirements for the work will need to conform to established industry safety standards, the remediation contractor(s) will implement routine control measures and BMPs measures during remediation activities to minimize lighting-related disturbance to adjacent properties and thereby avoid lighting-related complaints to the extent practicable. Routine control measures and BMPs will also be implemented to protect against potential light impacts on traffic safety. Specific lighting control measures and BMPs will be identified in the Final RD/RA Work Plan and/or the SIP for each RU, and those for the UDF will be identified in the Revised UDF OMM Plan and/or the UDF SIP. These will include proper positioning of lights, brightness, beam direction, height of light masts, and shielding to reduce the potential for off-site impacts to nearby receptors and public roads. To the extent practicable, lighting will be directed downward toward work areas, including rail loading/unloading areas, and away from neighboring properties and roadways. In addition, the use of low-mast lights and shielding will be used to limit off-site glare. To the extent practicable, areas or equipment that are not continuously occupied or used will be lit only when in use or to provide a safe travel corridor.

4.6.3 Investigation, Compliance, and Reporting

Evaluation of compliance with the lighting QOL standard will be triggered by complaints from nearby receptors. If a lighting complaint is received from the public, GE will investigate the complaint to determine whether the lighting issue is related to the remediation project. If multiple complaints are received regarding the same potential lighting source, they will be investigated together.

In such cases, GE will implement the complaint management program described in Section 7.2.3. For lighting complaints, GE will document the complaint(s), evaluate the source of the lighting to determine whether it is project-related, and notify EPA within 24 hours of receiving the complaint. If the lighting is project-related, GE will evaluate whether the lighting can be adjusted or mitigative measures can be implemented in a manner that does not compromise public safety or the safety of project workers and in a manner compliant with applicable safety regulations.

¹⁷ At EPA's request, light ordinances in the municipalities in which active remediation will occur as part of the ROR Remedial Action are listed in Attachment C for informational purpose, although, in accordance with the CD, compliance with these ordinances is not required for the on-site activities that comprise this Remedial Action.

If mitigation measures are deemed necessary to address a lighting complaint, GE will propose and implement such measures, as appropriate. The actions to be considered in such circumstances include the types of measures described in Section 4.6.4.

In any case, GE will notify the person who registered the complaint of the steps taken to resolve the complaint in accordance with the complaint management program described in Section 7.2.

4.6.4 Potential Contingency Response Actions and Mitigation Measures

If mitigation measures are deemed necessary to address a lighting complaint, GE will implement such measures, as appropriate. Selection of specific response actions will be determined on a case-by-case basis. In addition to the routine operational controls and BMPs described in Section 4.6.2, GE may consider the following measures, or other as-yet-unidentified measures, both for remediation areas and for support areas (i.e., temporary staging areas and rail loading/unloading areas), depending on the specific cause of the lighting issue:

- Adjusting the light positioning, mast height, or beam direction;
- Using a different type of lighting device;
- Installing shields, screens, or barriers between light sources and receptors;
- Using vegetative or landscape buffers between light sources and receptors;
- Repositioning equipment or other light-emitting devices; and/or
- Re-sequencing of the work.

4.7 Reporting

In addition to the reporting associated with specific QOL standard exceedances and complaints, as described in Sections 4.3 through 4.6, GE will develop a monthly QOL summary to document QOL monitoring results, any complaints received during the period, any exceedances of QOL standards, and any actions taken in response to monitoring or complaints. The QOL summary will be presented in tabular format and be submitted to EPA monthly.

5 River and Floodplain Recreational Activities

The ROR remediation activities may impact recreational use of the Housatonic River and floodplain areas during implementation. This section describes potential impacts that could occur to existing recreational use of the river and floodplain during the remediation activities and describes the process for evaluating potential recreational enhancements after the remedial construction is completed.

5.1 Impacts on Recreation During Remediation Activities

Active remediation activities will temporarily impact recreational use of portions of the Housatonic River and adjacent floodplains. The extent of these impacts will be addressed on an RU-specific basis considering the location, type of remediation, equipment implementing the remediation, and schedule or timing of the remediation. During active use, remediation areas, temporary support areas, and truck haul routes will be restricted from public access and use, as necessary, to protect public and construction worker safety and to allow for effective remedy implementation. For example, kayaking, canoeing, and fishing areas within portions of the river, as well as hiking and biking along trails that may be located within active remediation areas, will be closed during remediation activities in those areas. Because the ROR Remedial Action will be implemented in a phased manner, construction activities will be occurring only in certain portions of the ROR at any given time. When possible, the magnitude and duration of impacts or disruption to continued recreational use will be minimized to the extent practicable.

Because the potential impacts during remediation will vary by RU and are dependent on the type, location, and timing of remediation activities within each RU, areas of potential recreational impacts will be identified in the Final RD/RA Work Plan for each RU (i.e., after the remedial extents have been identified in the Conceptual RD/RA Work Plan and approved by EPA). The Final RD/RA Work Plan for each RU will also describe the anticipated measures to be implemented to address such impacts and ensure public and construction worker safety while allowing for effective remedy implementation. The actual locations and timing of such impacts and associated mitigation measures will not be fully understood until the construction phase is implemented.

During the remedial construction, restricted areas will be marked with appropriate signage and/or fencing. In addition, descriptive panels, designed by GE in coordination with EPA, will be installed at key recreational locations within the project area. These panels will describe the ROR remedial activities and inform the public how to find additional information on the project website and how to receive relevant notifications. In addition, GE will provide notice of affected recreational areas and uses through the community notification program described in Section 7.1, and it will address complaints related to impacts on recreational activities through the complaint management program described in Section 7.2.

5.2 Post-Remediation Recreational Enhancement

In accordance with Section II.H.11.b of the Revised Final Permit, GE will work cooperatively with the City of Pittsfield; the Towns of Great Barrington, Lee, Lenox, and Stockbridge; and the Commonwealth of Massachusetts to facilitate their future enhancement of recreational activities such as canoeing and other water activities, hiking, and biking on trails in the ROR corridor, on properties subject to remediation, and/or at locations of temporary access roads and staging areas.

After submittal of the Conceptual RD/RA Work Plan and prior to finalizing the Final RD/RA Work Plan for each RU, GE will contact officials from the local governments associated with that RU and applicable governmental landowners (e.g., the Massachusetts Division of Fisheries and Wildlife) to ascertain and discuss their proposals or plans (if any) for the enhancement or post-remediation use of the areas where remediation occurs or in areas where temporary access roads or staging areas are constructed. Such discussions and any resulting agreements on recreational enhancements will need to occur at least six months prior to the scheduled completion of work in the associated portion of the remediation area to allow time for development of decommissioning plans by GE's contractors in coordination with the local government's or governmental landowner's design and implementation schedule. If the local municipalities formally propose to EPA or GE an enhancement that extends across multiple reaches or RUs, GE will consider such an enhancement.

Because the remediation areas, temporary access roads, and staging areas will be located on properties owned by various public and private entities, any proposed recreational enhancements would require acceptance by the affected property owner(s). Additional factors that could affect the ability to enhance recreational use include, but are not limited to, the type and extent of improvements made during remedial construction, whether the proposed enhancements are reasonable and practicable, the pre-construction habitat conditions, potential adverse effects of the enhancement(s) on remedial or restoration effectiveness, the ability to come to agreement with the local government and affected property owners in a timely manner, the schedule for implementation and completion of the associated remedial construction work, the acceptance of the proposed enhancements by other project stakeholders, and the need for and extent of flood storage compensation and plans to obtain such compensation. GE will evaluate any potential enhancements on a case-by-case basis considering these and potentially other relevant factors.

6 Road Usage

In accordance with Section II.H.11.c of the Revised Final Permit, this section describes the methods to be implemented to reduce potential impacts of the remediation work on road conditions and usage. Specifically, this section describes measures to mitigate potential impacts due to increased traffic, particularly in or near residential areas, and measures to mitigate added stress on local roadway infrastructure. This section also includes a description of activities that will be performed to document the pre- and post-remediation conditions of local municipal roads and associated infrastructure (e.g., bridges and culverts) that may be used for the transportation of materials required for remediation.

6.1 Measures to Mitigate Traffic and Associated Impacts

The Revised T&D Plan describes generally the procedures for transporting and disposing of sediment, soil, and debris anticipated to be removed during the implementation of the ROR Remedial Action. Preparation of the Revised T&D Plan considered input from affected towns and landowners, as discussed in Section 3, and that plan includes a description and evaluation of certain measures to mitigate traffic impacts. The Revised T&D Plan also includes BMPs and temporary controls to minimize potential traffic accidents, such as posting of traffic control signs (e.g., speed, parking areas) in the work areas, and, where appropriate, utilization of traffic control personnel (e.g., flaggers). This section provides additional information on measures to mitigate potential impacts from increased traffic.

As a first step in reducing transport of material over the public roadways and mitigation of potential impacts due to such transport, the Revised T&D Plan includes hydraulic dredging and transport for the sediments in Reaches 5C, 6, 7B, 7C, 7G, and 8 of the ROR. Most of the sediment removed from these reaches would be removed from the ROR and transported hydraulically, without the need for trucks, either directly to the UDF or, where applicable, to an on-site rail loading area for transport off-site by rail. For material that cannot be transported hydraulically without the need for trucks, the Revised T&D Plan includes identification of the most likely anticipated routes for transportation of removed material from each RU (or group of RUs) to the UDF or to off-site disposal facility(ies) or, where applicable, to an on-site rail loading area, and it includes an estimate and evaluation of the number of truck trips that will be needed for such transportation.¹⁸

¹⁸ Consistent with the Final Revised SOW, the Revised T&D Plan did not address the transportation of imported cap and backfill materials to the removal areas, and this Revised QOL Compliance Plan does not specifically do so either. As noted in Section 4.4 of the Final Revised SOW, the transportation of such materials (including transport routes, truck trips, etc.) will be described on an RU-specific basis in the SIP for each RU once the source of such materials has been identified.

As noted in the Revised T&D Plan, EPA identified certain restricted roads in Section II.H.11.c of the Revised Final Permit – namely, Brunswick, Kenilworth, Warwick, and Chester Streets; Noblehurst Avenue; Revilla Terrace; and Shetland, Clydesdale, Pinto, Palomino, Anita, Lucia, Quirico, Joseph, and Eric Drives. The transport routes identified in the Revised T&D Plan for both on-site transport of removed material to the UDF and off-site transport to out-of-state disposal facilities were selected to avoid those restricted roads. In addition, due to input received in meetings held in July 2023 with the Town of Lee, Town of Lenox, and the City of Pittsfield, as well as during the November 2023 public meetings, and through public comment on the October 2023 T&D Plan, transport routes for the removed material were selected to avoid certain other roads of concern to the community. Section 6.3 summarizes ongoing efforts to coordinate with the community, including local municipalities, when developing additional details for transportation of material as part of the ROR Remedial Action.

Where possible, after exclusion of roads of concern to the community, the over-the-road traffic routes proposed in the Revised T&D Plan use roads that have been constructed to withstand traffic from the trucks to be used for the ROR Remedial Action. After EPA approval of the routes proposed in the Revised T&D Plan, the existing local roads that are part of the approved routes will be evaluated to determine the need for and type of reconditioning and upgrading of the roads and associated infrastructure to make them suitable for truck traffic. This evaluation will also consider the habitat/ecological impacts of the reconditioning or upgrades. The results of that evaluation and a proposal for such reconditioning and upgrading, where warranted, including the specific roads/infrastructure involved and the type of reconditioning/upgrading to be performed, will be included in the Final RD/RA Work Plan and/or SIP for each RU. At a minimum, it is anticipated that Roaring Brook Road will need to be reconditioned and upgraded to support construction activities in Reaches 5 and 6, including transportation to the UDF or off-site disposal facility(ies). The proposal for such reconditioning and upgrading will be included in the Final RD/RA Work Plan for the first RU for which use of Roaring Brook Road is anticipated (likely Reach 5A). In addition, other measures will be taken, such as construction of temporary access roads where feasible, for transportation of material within the Site limits.

Finally, to mitigate potential impacts to roadway infrastructure, over-the-road transport of materials to off-site disposal facility(ies) will be performed by licensed haulers in accordance with appropriate federal, state, and local regulations. Haulers will also be required to be familiar with road use limitations (e.g., weight restrictions). While not anticipated, should any off-site material transportation vehicle exceed typical state weight allowances, all applicable permits will be obtained from the state government in a timely manner. Material transport vehicles leaving the work area will be lined and covered to avoid spillage during transportation (as necessary) and will be labeled and documented in accordance with federal and state requirements. Transporters will be provided with a copy of the routes identified in the final EPA-approved work plans. In addition, to the extent

practicable, the remediation contractor(s) will be encouraged to schedule trucking operations to avoid the key busy hours in each local community (e.g., school pick-up and drop-off times). Further, during the implementation of the remediation activities, the remediation contractor(s) will ensure that transporters perform work in accordance with the design requirements, including following established routes and safety requirements.

6.2 Monitoring of Roadway Infrastructure Conditions

This section includes a description of activities that will be performed to document the pre-, during-, and post-remediation conditions of local paved municipal roads and associated infrastructure (e.g., bridges and culverts) that may be used for the transportation of materials required for remediation, including transport of clean backfill and cap materials, or by other project-related commercial vehicles that exceed Massachusetts Department of Transportation weight limitations, so as to evaluate the impacts of the remediation-related transportation on those roads/infrastructure.

Given that the types of and schedules for remediation in each RU will vary (and thus associated road usage will vary), it is possible that the pre-construction, during-construction, and post-construction assessments described in the following subsections may be performed at different times for different road segments. For each assessment (i.e., pre-construction, during-construction, and post-construction), GE will discuss the results of the assessment with EPA and the affected local municipalities.

6.2.1 *Pre-Construction Baseline Assessment*

After EPA approval of the Revised T&D Plan and Final RD/RA Work Plan and/or SIP for each RU but before the start of the on-site remediation work in the RU, a pre-construction assessment will be performed to assess the baseline condition of the local paved municipal roads and associated infrastructure (e.g., bridges and culverts) along the approved travel routes for transportation from that RU to the UDF or to off-site disposal facility(ies) or to an on-site rail loading area. This baseline assessment will include the approved routes identified on local paved municipal roads (i.e., the paved municipal roads leading to, but not including, the state or federal roads) in the City of Pittsfield and in the Towns of Lenox, Lee, Great Barrington, and Stockbridge. For any municipal roads identified in the Final RD/RA Work Plan and/or SIP for each RU for which reconditioning and upgrading is recommended, the pre-construction assessment will be performed before the reconditioning/upgrading is performed.

The methods for measuring and assessing the baseline condition of the local paved municipal roads and associated infrastructure will include the following:

- Road imaging technology to document the condition of roads; and

- Photographic documentation of the condition of infrastructure associated with such roads, including bridges, culverts, or other exposed infrastructure that is not captured by road imaging technology.

Specifically, to assess the condition of paved municipal roads and associated infrastructure to be used during the ROR Remedial Action, GE will first evaluate the roads using specialized data collection vehicles equipped with sensors and instruments such as the following:

- **Laser Crack Measurement System:** This system will be used to assess and quantify cracks and fissures in road pavements. This system utilizes lasers and imaging techniques to detect, measure, and document the extent and severity of cracks on the pavement surface.
- **High-Resolution Cameras:** These cameras will be used to capture images of the pavement surface, providing visual data on cracks, potholes, and other defects.
- **Global Positioning System (GPS):** Pavement distress data will be georeferenced using GPS to allow for the accurate mapping of pavement conditions.

These imaging and measurement technologies will document a 360-degree and three-dimensional view of the pre-existing condition of the paved municipal roads and associated infrastructure to be used during construction, as required by Section 4.3.1.3 of the Final Revised SOW.

For roads to be assessed using these procedures, the sensors and instruments will continuously gather data as the data collection vehicles travel along the road segments. These data will include measurements of pavement distress and other key pavement parameters. The data will be used to calculate performance measures like Pavement Serviceability Index (PSI) to be used for comparison of baseline assessments with the during- and post-construction assessments.

GE will capture and archive imagery and associated information for the roads and infrastructure documented with photographs during the baseline assessment. Standardized photograph locations (with position and direction) will be established in the field to document each infrastructure. A photographic log will be established to compare with the post-construction photographic log (see Section 6.2.3).

In addition, as needed, ground-penetrating radar (GPR) technology may be used to assess subsurface conditions of the municipal roads and infrastructure before use. The need for GPR will be based on review of the preliminary results collected with road imaging technology and photographs. Standard operating procedures for use of GPR are presented in Appendix BB to GE's latest revised FSP/QAPP.

To the extent practicable, the pre-construction baseline assessment will be scheduled during favorable weather conditions (i.e., without leaves, rain, snow, etc. on the roadway that may impair visibility or the usability of equipment), likely in spring or summer.

6.2.2 *Assessment During Construction*

During construction, the same procedures and methods used to perform the baseline assessment will be repeated at least every two years, with a minimum of once during construction (for roads anticipated to be used for less than two years) for all paved municipal roads and infrastructure that were evaluated prior to construction. Specifically, for the assessment(s) conducted during construction activities, GE will repeat the following activities:

- Collect data via specialized data collection vehicles; and
- Photograph infrastructure not captured via the data collection vehicles.

The results of the first during-construction assessment will be compared to those of the pre-construction assessment to identify indications of stress or damage to the roads or infrastructure that may result in the need for maintenance. Thereafter, as appropriate, the results of the during-construction assessment will be compared to the results of the most recent prior assessment conducted during construction. If any of these during-construction assessments will require vibration monitoring in addition to the procedures and methods proposed herein, the vibration monitoring requirements and procedures will be proposed to EPA on a case-specific basis.

If an indication of stress or damage is observed, GE will evaluate the changes in roadway or infrastructure condition (based on standard metrics, such as condition rating and PSI) in the roads or infrastructure directly impacted by transportation activities for the ROR Remedial Action to determine whether the stress or damage can be attributed to road traffic associated with the ROR Remedial Action (i.e., beyond normal wear and tear). As part of this evaluation, the during-construction photographic log will be compared to the pre-construction photographic log, and substantial visual differences that are noted will be reviewed in the field by a professional engineer to determine whether the stress or damage can be attributed to the road traffic associated with the ROR Remedial Action.

As noted above, GE will discuss the results of this during-construction assessment with EPA and the affected local municipalities, regardless of whether there was any damage or whether the damage was caused by the ROR Remedial Action. If the stress or damage is attributed to the ROR Remedial Action, GE will further discuss with EPA and the affected local municipality the appropriate steps for maintenance or repair. It is anticipated that, if the stress or damage is attributed to the ROR Remedial Action but is not considered a safety hazard for the public or remedial construction workers, the maintenance/repair will be postponed until after construction is complete. If the stress or damage attributed to the ROR Remedial Action is a safety hazard, GE will correct such stress or damage as soon as possible, after discussing such correction with the affected municipality. If appropriate, GE will discuss with EPA and the affected local municipality whether pavement

preservation tactics should be utilized to extend the life of the pavement through completion of construction.

6.2.3 *Post-Construction Assessment*

After construction is complete, the same procedures and methods used to perform the baseline and during-construction assessments will be repeated for the same municipal roads and infrastructure utilized during the ROR Remedial Action. Similar to the evaluation of results to be conducted during construction, the results of the post-construction assessment will be compared to those of the prior construction assessment(s) to identify stress or damage to the roads or infrastructure and to determine whether such stress or damage may be due to project activities (i.e., beyond normal wear and tear).

GE will discuss the results of this post-construction assessment with EPA and the affected local municipalities (regardless of whether there was any damage or whether the damage was caused by the ROR Remedial Action). If any stress or damage is attributed to the ROR Remedial Action, GE will submit to EPA for review and approval a plan and schedule for maintenance and/or repair of such stress or damage; and GE will discuss the appropriate steps for maintenance or repair with EPA and the affected local municipality(ies).

6.3 Scheduling and Community Coordination

Community outreach and coordination regarding the ROR Remedial Action will be ongoing. With respect to transportation and road use, the transportation routes proposed in the October 2024 Revised T&D Plan were selected to avoid the designated restricted routes and in consideration of input received during discussions with the affected local municipalities and local community (see Section 6.1) as well as the requirements specified in EPA's June 4, 2024 letter on the October 2023 T&D plan. Additionally, EPA has scheduled a public meeting for December 4, 2024, to further discuss GE's Revised T&D Plan.

Pertinent additional updates related to transportation and road usage will be developed as the ROR Remedial Action design proceeds and will be included in the Final RD/RA Work Plan or SIP for Reach 5A and in similar design documents for the downstream RUs. As discussed in Section 3, additional meetings with local municipalities are anticipated to discuss such updates during development of the future design documents. Such updates will include RU-specific information on specific modes of transportation and transportation routes to the UDF, to the selected off-site disposal facilities, and/or to rail loading areas. As appropriate and in consultation with EPA, addenda to the Revised T&D Plan may also be submitted to EPA periodically to summarize the RU-specific updates as they relate to transportation and disposal activities.

7 Community Coordination and Health and Safety

In accordance with Section II.H.11.e of the Revised Final Permit, this section describes the communication methods that will be employed to provide community access to project information and updates during the ROR remedial construction (Section 7.1). In addition, this section describes how community complaints and concerns will be addressed during the remediation activities (Section 7.2).

7.1 Community Education and Notification Program

A community education and notification program will be established to do the following: (1) make project-related information readily accessible to the public; (2) provide project-related updates to the public; and (3) disseminate information about any project emergencies to the public. Under this program, non-emergency project information will be distributed to the public through various methods. Such information will include information on where and when remediation activities will be occurring, impacts on recreational use of the river and floodplain, traffic patterns for trucks transporting materials to or from the project site, and monitoring results for QOL standard parameters.

The following community information activities will be undertaken by GE and its contractors and are in addition to any activities that may be conducted by EPA.

7.1.1 *Community Liaison*

GE will designate a community liaison who will assist in providing project information to the public, responding to specific inquiries and/or requests for information, and receiving any complaints. This community liaison will be available during work activities to answer questions or address concerns. This project representative will coordinate public outreach activities with EPA's Community Involvement Coordinator and will also attend project-related meetings, as requested by EPA, to inform the public of project activities.

7.1.2 *Project Website*

In accordance with Section II.H.11.e.(1) of the Revised Final Permit, GE will create a project website to provide the public with convenient access to information about the ROR remediation activities. This website will be created and made public at least 30 days prior to the start of the UDF construction. GE will update the website on a regular basis to provide access to project-related information and status. Specifically, the website will be updated routinely to provide information to the community about the areas where work is currently being performed, general anticipated hours of operation, and schedules and locations of upcoming activities. The website will also include a summary of QOL monitoring data (including any exceedances of Notification and Action Levels) added to the website

within 72 hours following receipt of the data. In addition, the website will provide community access to other relevant project data, technical reports, work plans, and project fact sheets. It will include information about upcoming public meetings and announcements related to the project.

The website will include a link for the public to ask questions of the project team, report a problem, or register a complaint (see Section 7.2). Contact information for key project personnel and EPA representatives will also be provided on the website.

GE's project website will include links to other project information hosted on other websites, including EPA's ROR website (EPA 2024), which includes a collection of publicly available project documents relating to this project.

Once GE's project website is operational, GE will send out a localized mailer that notifies the town administrators of the municipalities along Reaches 5 through 8, the residents in or adjacent to those reaches, and residents along selected transport routes of the GE project website and provides a URL to that website.

7.1.3 Public Meetings

It is anticipated that EPA will host public meetings periodically at various project milestones and at the request of the local communities. The public meetings are expected to provide opportunities to provide information to the public, answer questions, listen to comments, and gather input from community members. The schedule and locations of public meetings will be determined by EPA in coordination with other project stakeholders. As requested by EPA, GE representatives will participate in project-related public meetings to provide project updates or provide information or resources to EPA to support public meetings.

7.1.4 Fact Sheets

Periodically, during the course of the project, fact sheets will be distributed to communicate project-related information to the community. GE will develop such project fact sheets in coordination with EPA. The fact sheets will be short (i.e., two to four pages) and written in non-technical language and will provide updates on project status or summarize technical documents or elements of the remediation. The fact sheets will include contact information for key project personnel and links to project websites with more technical information. It is anticipated that fact sheets will be issued at key project milestones, as events dictate, or in response to community requests to inform the public of upcoming work, such as prior to commencing field construction or remediation work in a given RU or in a new geographic area.

Fact sheets will be made available on GE's project website and will be emailed to individuals who request to be added to GE's distribution list (see Section 7.1.5).

7.1.5 Project Email Communications and Distribution Lists

Email provides a quick and direct means of communication to provide information to large numbers of interested parties. As such, an email distribution list will be created and updated throughout the project for any interested parties to receive project communications (e.g., project status updates or fact sheets). The database of interested parties and their affiliations will be developed to allow for efficient communication of information and to categorize the interested parties into subgroups for applicable communications (e.g., based on geographic region). Interested parties will be able to sign up for the distribution list through GE's project website (Section 7.1.2). Names and contact information on the distribution list will not be available to the public, nor will they be used for any non-project related purposes.

7.1.6 Coordination with Affected Residents and Landowners

Based on the requirements of the Revised Final Permit, remediation will be conducted within specific reaches of the Housatonic River and on various properties within its floodplain. Remediation, temporary access roads, and temporary staging areas will be required on several private properties; and GE will need the owners' permission to access those properties. EPA's approval of this Revised QOL Compliance Plan does not obviate the need for GE to obtain permission for access to private properties needed to conduct the work.

Prior to commencement of remediation activities in a given area, GE will attempt to contact residents and landowners who will be directly affected by remediation work on their properties or immediately adjacent to their properties (i.e., shoreline properties adjacent to the river). This outreach will be made to explain the upcoming project activities and provide an anticipated schedule for the work activities in the vicinity of the affected properties. Once the remediation work commences, GE will maintain routine communications with affected residents and landowners throughout the duration of work on their property(ies) or immediately adjacent to their property(ies) (for shoreline properties adjacent to the river). This outreach will include routine updates to the property owners on the ongoing activities, areas of work, planned restoration, and the anticipated schedule. Such outreach will be made by email, hardcopy mailings, telephone, or property visits. The mode of such communications may vary based on specific property owner preferences.

7.2 Complaint Management Program

A complaint management program will be developed to manage all reported project-related complaints, including those associated with air quality, visible dust, noise, odor, lighting, recreational use, and traffic. The goals of the complaint management program will be as follows: (1) enable the public to register project-related complaints during work activities; and (2) provide timely notification of efforts to address the subject of their complaints. The complaint management program will be operational while active remediation activities are ongoing.

7.2.1 Methods for Registering a Complaint

The following communication methods may be used by the public to register complaints:

- **Phone:** GE will establish a phone number that will be active while remediation activities are being performed.
- **Email:** The public will be able to register complaints via a dedicated email address.
- **Project Website:** The public will be able to register complaints by using a link on GE's project website (Section 7.1.2).

The phone number, email address, and website address to be used by the public to register complaints will be included on project fact sheets and other public communications, and they will be prominently displayed on GE's project website (Section 7.1.2).

7.2.2 Types of Public Input Anticipated

The public will be advised to use the communication methods described in Section 7.2.1 to request information, ask questions, and register complaints. The following subsections summarize the types of public input that may be received through those communication methods.

7.2.2.1 Inquiries and Requests for Information

An inquiry is a public request for project information where corrective action is not requested. When inquiries are received by phone, email, or the project website, the communication will be documented in a log noting the time received, subject of the inquiry, the name of the individual submitting the inquiry, and any follow-up required (e.g., if any agencies need to be involved).

Phone inquiries may be fully addressed during the initial communication; for example, a question will be answered or requested information will be sent to the individual making the request. If the inquiry cannot be answered at that time, the caller will be advised of a time for providing a response. It is expected that email and project website inquiries will be responded to within 48 hours of initial receipt to the extent practicable. No regulatory notification or follow-up will be required for inquiries or requests for information.

7.2.2.2 Complaints

A complaint is a public communication requesting that an investigation be conducted or that corrective action be taken regarding some aspect of the project, including those associated with a QOL issue (i.e., air quality, noise, odor, or lighting), recreational activities, or traffic. The handling of complaints is described in Section 7.2.3.

7.2.2.3 Emergencies

The public may report an emergency via the project telephone line but will be advised to first call 911. Specifically, regardless of when an emergency communication is received or whether the emergency is project-related, the caller will be asked to immediately call 911. A call will then be placed to personnel at the project site to inform the project team of the reported emergency. If the emergency is project-related, GE will implement the emergency response procedures specified in the Contingency and Emergency Response Procedures Plan included in the revised POP submitted on November 22, 2024. If a project-related emergency affects public areas or routes, affects multiple property owners, or requires an evacuation, GE will also contact the applicable municipality representative(s) to coordinate the emergency response.

7.2.3 *Handling and Evaluation of Complaints*

Complaints will be recorded in a log noting the time the complaint was received, the subject and location of the complaint, the name of the person registering the complaint, and complainant's contact information. Once a complaint is received, the project team will investigate to determine whether the subject of the complaint is related to the ROR Remedial Action project.

If the complaint is determined to be project-related and the subject of the complaint has a specific numerical QOL standard (i.e., a complaint relating to air quality or noise), GE will review the relevant monitoring data or conduct monitoring to determine whether there was or is a project-related exceedance of the standard. If there was such an exceedance, GE will implement the process for responding to exceedances of those QOL standards, as described in Sections 4.3.3 and 4.3.4 or Sections 4.4.3 and 4.4.4, as applicable. If there was no such exceedance, GE will work with EPA to evaluate potential mitigation measures to address the complaint, and if mitigation measures are possible and both GE and EPA agree, GE will implement such measures.

If the complaint is determined to be project-related and relates to the subject of a non-numerical QOL standard (i.e., an odor or lighting complaint), GE will evaluate the complaint following the steps specified in Section 4.5.3 (for odor complaints) or Section 4.6.3 (for lighting complaints).

If the complaint is determined to be project-related and relates to a different type of impact that does not have a quantitative or qualitative standard (e.g., traffic or recreational impacts), GE will evaluate the complaint, consider the need for and type of mitigation measures, coordinate with EPA as appropriate, and if both EPA and GE agree that mitigation measures are possible and warranted, implement such measures.

If a complaint is critical (i.e., if the individual registering the complaint is claiming a severe impact), GE will attempt to inform the complainant within 24 hours, no matter when the initial complaint was received, of efforts to address the complaint. If the complaint is not critical (i.e., if the individual

registering the complaint is not claiming a severe impact), GE will attempt to inform the complainant within 48 hours (or 72 hours if complaint is received over the weekend) of efforts to address the complaint.

Once GE has completed an investigation into the complaint i.e., once the complaint has been evaluated, monitoring or other investigation has been conducted, and mitigation measures have been implemented if warranted GE will communicate with the complainant to report the conclusions of the investigation and any actions taken.

GE will provide a verbal summary of complaints received, related communications, and any response actions to EPA at periodic progress meetings. As discussed in Section 4.7, a written summary of complaints received, related communications, and response actions, if any, will be provided to EPA on a monthly basis during the construction season.

8 References

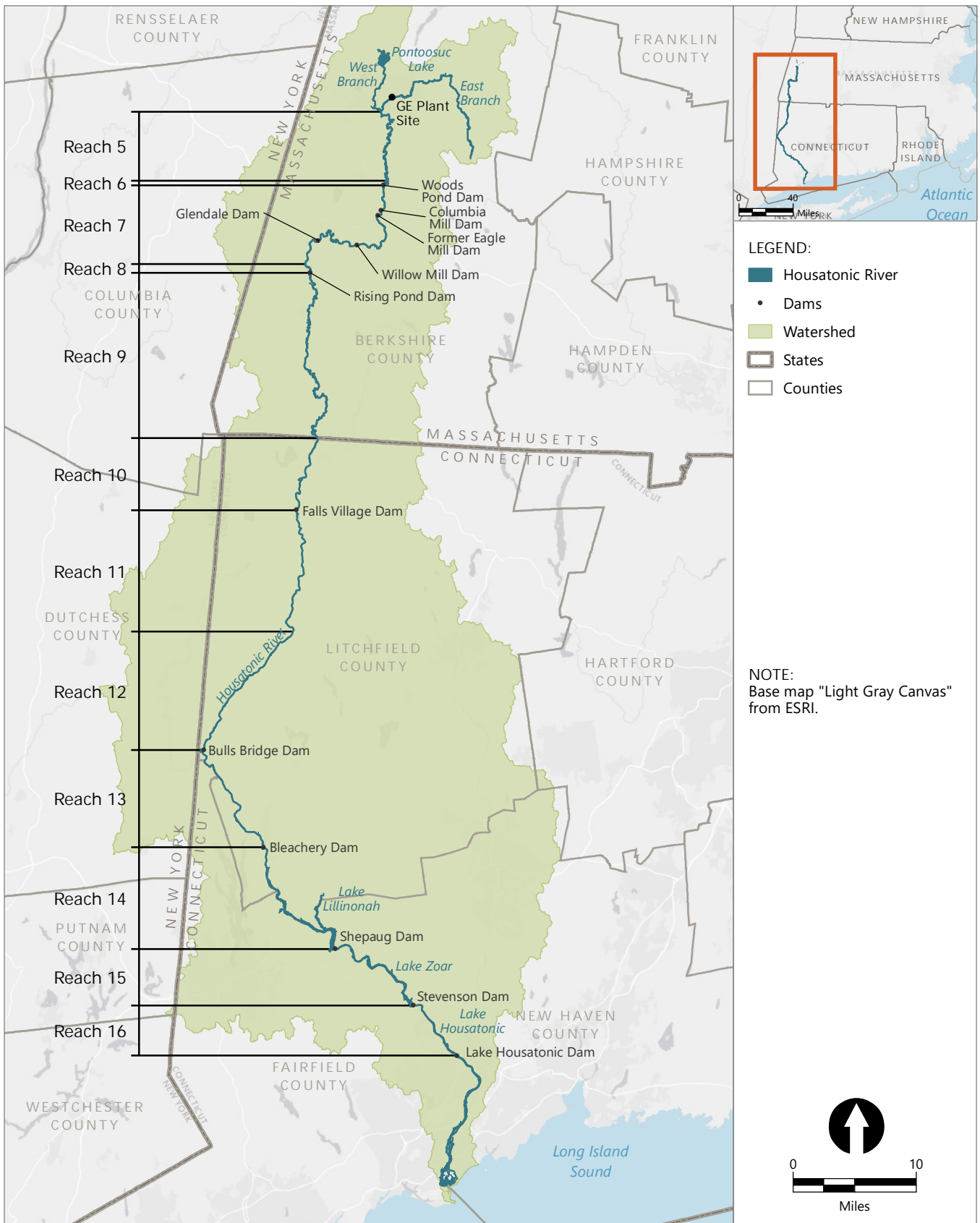
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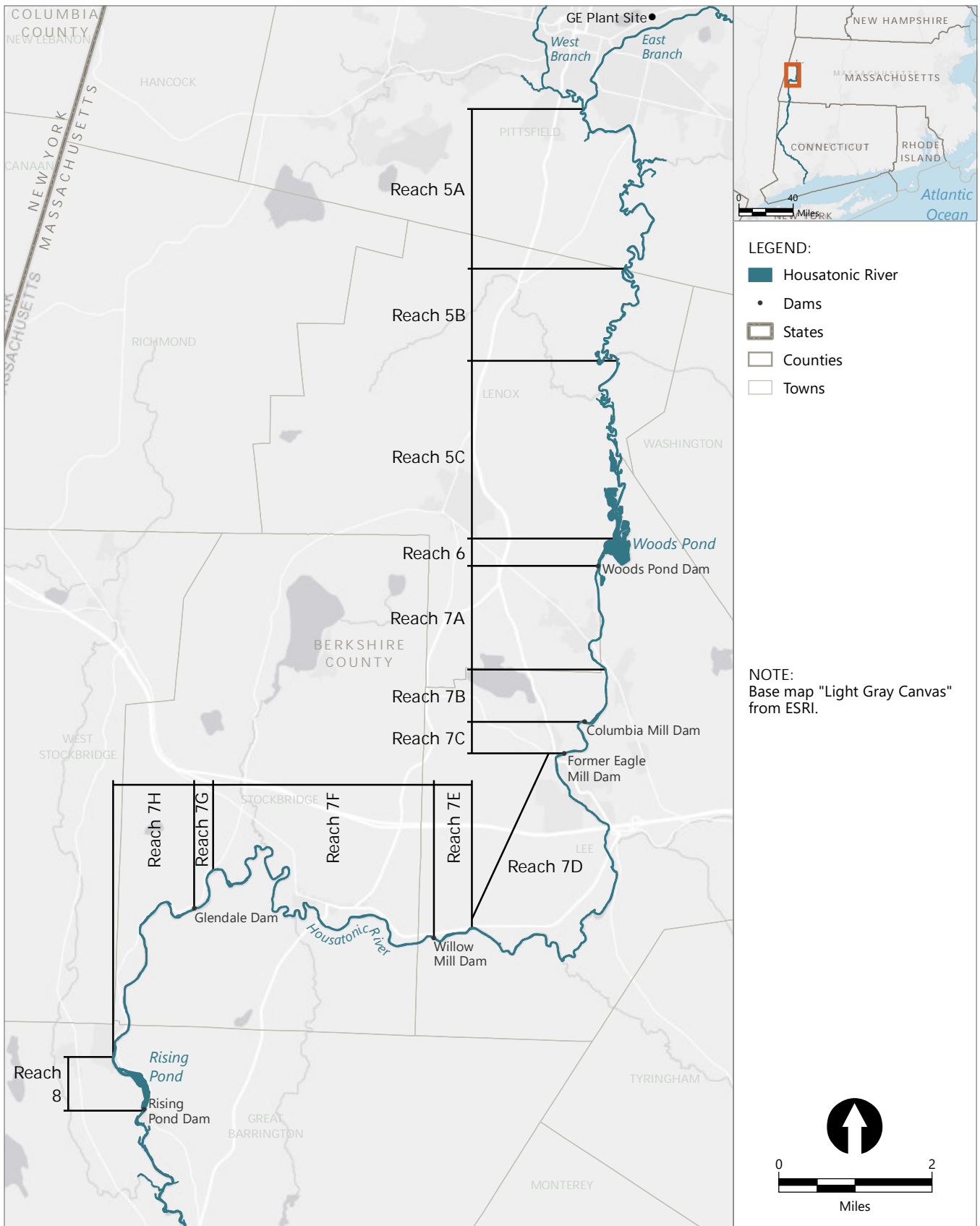
Figures



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Figure 1-1
 Housatonic River Map
 Revised Quality of Life Compliance Plan
 Housatonic River – Rest of River

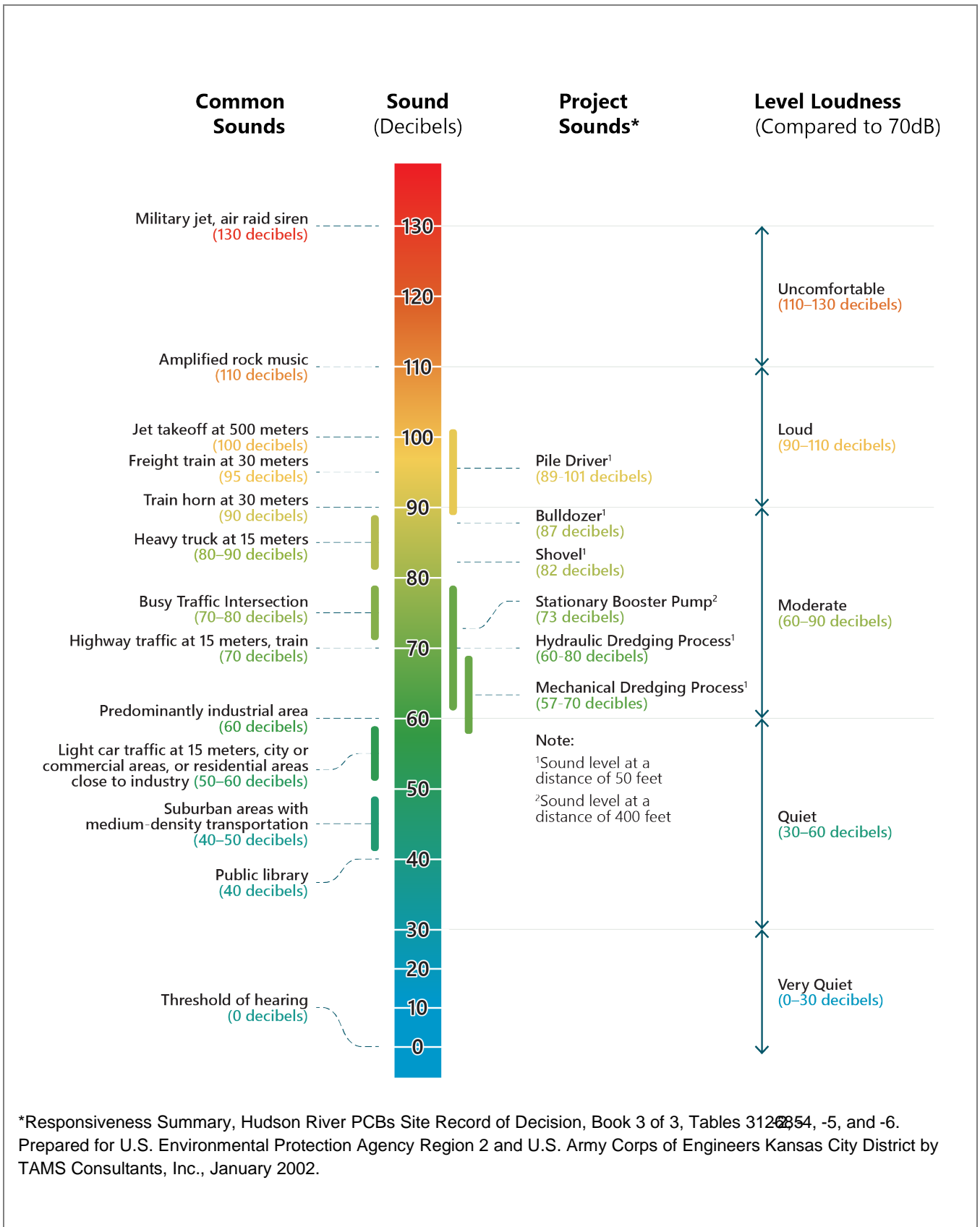


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Figure 1-2
 Housatonic River Map (Subreaches in Reaches 5 and 7)

Revised Quality of Life Compliance Plan
 Housatonic River – Rest of River



*Responsiveness Summary, Hudson River PCBs Site Record of Decision, Book 3 of 3, Tables 312-254, -5, and -6. Prepared for U.S. Environmental Protection Agency Region 2 and U.S. Army Corps of Engineers Kansas City District by TAMS Consultants, Inc., January 2002.

Filepath: https://anchorqea.sharepoint.com/sites/HousatonicRiver-portal/Site_Wide/QOL_Plan/2024-11-Revised_QOL_Plan/Figures/Fig-4_HousatonicRiverQualityNoiseFigure2.docx



Figure 4-1
 Comparison of Anticipated ROR Remediation Noise Levels with Other Common Noise Levels
 Revised Quality of Life Compliance Plan
 Housatonic River– Rest of River

Attachment A

EPA Fact Sheet Entitled, Rest of River
Cleanup and the Upland Disposal Facility
Will Not Pose a Health Threat from
Airborne PCBs

The purpose of these levels is twofold:

- To monitor the concentration of PCBs in air to ensure the cleanup is being conducted safely for the public, nearby residents, and workers.
- To monitor active construction, placement of material, and post-capping monitoring of the Upland Disposal Facility (U

If a PCB Notification Level is exceeded, GE must notify EPA as soon as practicable, but no later than 24 hours after receipt of data. GE also must post a summary of the data or note the exceedance on a web page that GE will establish, within 72 hours of receipt of the data. GE is also required to implement additional response actions in consultation with EPA to prevent exceeding the Action Level.

If a PCB Action Level is exceeded, GE must notify EPA as soon as practicable, but no later than 24 hours after receipt of data. GE also must post a summary of the data or note the exceedance on a web page that GE will establish, within 72 hours of receipt of the data. Also, GE must stop work temporarily in the area of the exceedance; discuss with EPA appropriate immediate or short-term response actions; conduct additional air sampling, if warranted, to confirm the exceedance; evaluate the cause of the exceedance; and propose to EPA appropriate engineering controls or other corrective actions. EPA approval of appropriate response actions will be required before GE can restart work in the subject area.

In addition to PCB monitoring, GE is required to conduct monitoring for dust (also known as particulates). GE will conduct late monitoring daily during dry excavation for a minimum of 10 hours when construction is ongoing and throughout the duration of construction activities using real-time airborne particulate monitors. The monitors will be equipped with alarms that will alert whether concentrations exceed a Notification or Action Level for dust.

PREVENTION OF AIRBORNE PCBs DURING CLEANUP & CONSTRUCTION

During the cleanup, GE will be required to implement control measures and best management practices to control dust and air emissions. These measures include dust suppression (such as applying a water spray to unpaved haul roads and material staging piles), using covers on trucks and rail cars, proper decontamination of work equipment and vehicles, and preventing tracking of soils onto haul roads.

In the event of an exceedance of an air quality Notification or Action Level at active work areas additional response actions, mitigation measures, and/or engineering and operational controls will be evaluated and implemented, such as:

- 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;
- Reducing the speed of material-handling equipment;
- Prioritizing management of and reducing staging time for sediments and soils containing high PCB concentrations;
- Using a spray-on cover, biodegradable vapor-suppressive fabric or other temporary cover on exposed soil/sediment or over material stockpiles; and/or
- Erecting wind screens around material handling operations



Example of secured truck used at the Raymark Superfund Site in Stratford, Connecticut

CLOSER LOOK

Past PCB Air Monitoring Results are Below Protective Levels:

Past air monitoring data collected during Site cleanups by both EPA and GE for over 20 years show that almost all cleanup results are much lower than the airborne PCB Notification and Action Levels. Moreover, the concentrations of PCBs in soil and sediment at these past cleanups were, in most cases, much greater (orders of magnitude) than those that will be encountered in the Rest of River. When there were isolated exceedances of the Notification or Action Levels at active work areas, GE implemented engineering controls such as limiting the duration an excavation area remained open, covering an active excavation area nightly, excavation removal of temporary stockpiles, and increasing wetting of the exposed soils.

This Site-specific air monitoring data demonstrates that the upcoming remediation, transportation, placement, and operation of UDF can be done safely.

Specific examples of this past data are as follows:

Air Monitoring Example One: In the four years of excavation that EPA conducted in the 1½-Mile Reach of the River in Pittsburgh, there were no exceedances of the health-based PCB Action Level and only one exceedance of the PCB Notification Level. The percentage of samples did not even detect PCBs. See graph below. The 1½-Mile Reach had sediment PCB concentrations that were higher than those that currently exist in the Rest of River. For more details, see EPA's 2020 Response to Comments, page 10.

Note to Figure: The maximum concentration of PCBs detected in air during the 1½-Mile Removal action was observed on 10/20/2004, with a concentration of 0.07857 µg/m³. This air sample was a duplicate sample, with the parent sample having a concentration of 0.04297 µg/m³. Duplicate samples are collected for quality assurance purposes and the concentrations are compared to the parent sample. The duplicate sample was identified as an anomaly based on very low air volume collected in the sample resulting in a high bias in the data's analytical result. Both the parent and duplicate samples were below the Action Level of 0.1 µg/m³.

Approximately 71% of all air samples collected were below the laboratory's detection limits, meaning the concentrations were so low that the laboratory instruments were unable to quantify the concentration of PCBs in the collected air samples, and the percentage of all detected results were well below the Notification and Action Levels. Note the data is plotted by station and not chronologically.

Air Monitoring Example Two: EPA has conducted outdoor PCB air sampling at Allendale School in Pittsfield. Since the sampling began in December 2005, the maximum PCB concentration detected was 0.002906 µg/m³, which was during placement of contaminated material into the nearby Building 71 landfill. Since 2007, after the capping of the Building 71 landfill, the maximum (0.0021 µg/m³) and average (0.0005 µg/m³) PCB air detections were well below the Notification/Action Levels for Allendale School. A large percentage of samples did not even detect PCBs. For more details, see EPA's 2020 Response to Comment, page 16. The figure below graphically demonstrates the data.

Note to Figure: Approximately 140 air samples have been collected through 2023. Over 50% of the results were below the laboratory detection limits. All other samples were below the Notification/Action Level of 0.05 µg/m³. Allendale-1 Co-located sample is a duplicate location of the parent Allendale-1 sample.

