APPENDIX 6

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

Prepared by: USEPA

FIVE-YEAR REVIEW SITE INSPECTION OBJECTIVES

Site inspections, as part of the five-year review processes, are conducted to provide information about a site's status and to visually confirm and document the conditions of the remedy, the site, and the surrounding area.

The five-year review site inspection checklist, developed by EPA and the U.S. Army Corps of Engineers (USACE), was used for the purpose of collection important information during the site inspection portion of the five-year review. The inspection checklist for the Hudson River PCBs Superfund Site is divided into sections as follows:

- I. Site Information
- II. Interviews
- III. On-site Documents & Records Verified
- IV. System Operations Costs
- V. Access and Institutional Controls
- VI. General Site Conditions
- VII. Overall Observations

Site inspections for this FYR were conducted for OU1 on August 30, 2022, and for OU2 on Oct 5, 2022. The inspections were conducted by EPA and included representatives from GE. Beside this site inspections, EPA team has been regularly working at multiple areas throughout the site and making observations. This includes making observations while observing the water, fish, and sediment monitoring programs as well as while observing the habitat restoration program. Additional inspection forms are not provided for these regular observations as they assist to inform EPA and USACE with the context of the site while the Site Inspection is being performed.

APPENDIX 6-1

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST OU1

Prepared by: USEPA

Five-Year Review Site Inspection Checklist – OU1

I. SITE INF	ORMATION
Site name: Hudson River PCBs Superfund Site, OU1: Remnant Deposit Sites	Date of inspection: August 30, 2022
Location and Region: New York, Hudson Falls and Fort Edward	EPA ID: NYD980763841
Agency, office, or company leading the five-year review: EPA Region 2	Weather/temperature: Partly cloudy; 80° F
\boxtimes Access controls	Monitored natural attenuation/recovery Groundwater containment Vertical barrier walls
Attachments: Inspection team roster attached	⊠ Site map attached
II. INTERVIEWS (Not Applica	able - See Part 4 Other Interviews)
1. System Operations Site Manager	
NameTitleInterviewed \Box at site \Box at office \Box by phonePhoneProblems, suggestions; \Box Report attached	Date
 System Operations Staff	Title Date

3.	Local regulatory authorities and respons office, police department, office of public h deeds, or other city and county offices, etc.)	ealth or environmental heal	
	Agency		
	Contact		
	ContactName		Date Phone no.
	Problems; suggestions; \Box Report attached		
	Agency		
	Contact		
	ContactName	Title	Date Phone no.
	Problems; suggestions; \Box Report attached		
	Agency		
	ContactName		
	Name	Title	Date Phone no.
	Problems; suggestions; \Box Report attached		
	Agency		
	ContactName		
	Name Problems; suggestions; □ Report attached _		Date Phone no.
4.	Other interviews (optional)		
	ngs between Environmental Protection Agency iweekly basis over the past five years.	(EPA) and General Electro	ic (GE) have generally occurred
III. O	N-SITE DOCUMENTS & RECORDS VEF	RIFIED (Check all that app	oly)
1.	System Operations Documents		
	System Operations manual(s)	⊠Readily available	\square Up to date \square N/A
	\boxtimes As-built drawings	\boxtimes Readily available	\square Up to date \square N/A
	Maintenance logs	\boxtimes Readily available	\square Up to date \square N/A
	-	•	$\square \square \square \square A$
	Remarks: Documents produced by GE are p	brovided to EPA.	
2.	Site-Specific Health and Safety Plan	⊠ Readily available	1
_	□ Contingency plan/emergency response pl	2	\Box Up to date \boxtimes N/A
Remar	ks: GE maintains Health and Safety Plans for	the Remnant Deposits	
3.	System Operations and OSHA Training	Records Readily availated	ble \Box Up to date \boxtimes N/A

Remarks_

4.	Permits and Service Agreeme	nts			
	□Air discharge permit	□ Readily available	\Box Up to date	🖾 N/A	
	□ Effluent discharge	🗆 Readily available	\Box Up to date	🖾 N/A	
	🗆 Waste disposal, POTW	□ Readily available	\Box Up to date	🖾 N/A	
	Other permits:	\Box Readily available \Box	Up to date $\square N/2$	A	
	Remarks:				
6.	Discharge Compliance Record				
	□Air	□ Readily available	-	⊠ N/A	
	□ Water (effluent) Remarks:	Readily available	\Box Up to date	🖾 N/A	
7.	Daily Access/Security Logs	□ Readily available	-	X N/A	
	Remarks: <u>Access is controlled a</u>	nd restricted with fences surround	ling deposits.		
	IV.	SYSTEM OPERATIONS COS	TS		
1.	System Operations Organizati				
	□ State in-house ☑ PRP in-house	□ Contractor for State ☑ Contractor for PRP			
	□ Federal Facility in-house		lity		
	Remarks: OM&M is performed by GE and overseen by EPA.				
	consent decree with the United	ment in place (GE performing rem		-	
	Total annua	al cost by year for review period i	f available		
	From To		Breakdown attached		
	Date Date				
	FromTo		Breakdown attached		
	Date Date From To		Breakdown attached		
	Date Date		Breakdown attached		
	From To		Breakdown attached		
	Date Date		Breakdown attached		
	From To Date Date		Breakdown allached		
	V ACCESS AND IN	STITUTIONAL CONTROLS	v Applicable		
Δ Ε.		STITUTIONAL CONTROLS			
A. Fe	0				
1.		1	Gates secured 🛛 🕅		
		in the tall and chring of each year	Jonn domogo 10 guidt		
	Remarks: Fencing is inspected ther Access Restrictions	in the fair and spring of each year	, any damage is quick.	ly repaired.	

 1.
 Signs and other security measures
 □ Location shown on site map
 □ N/A

 Remarks:
 OU1 remnant deposit signs were inspected on August 30, 2022 and were satisfactory. These signs are inspected regularly twice a year and replaced as needed.

C. Institutional Controls (ICs)

1. Implementation and enforcement

Remarks: The ROD did not identify institutional controls for the remnant deposits. However, EPA has identified institutional controls that should be implemented to restrict future use of the remnant properties to uses and activities that would not compromise the integrity of the cap system or result in unacceptable risks of exposures to contaminants. EPA, New York State, and GE are researching ownership of the remnant sites so that an appropriate institutional control can be implemented.

2. Adequacy \Box ICs are adequate \boxtimes ICs are inadequate \Box N/A Remarks: See Above.

D. General

- 1. Vandalism/trespassing □ Location shown on site map ⊠ No vandalism evident Remarks: No vandalism observed during the inspection, The sites are inspected a minimum of twice a year and evidence of trespassing and vandalism are documented. It is common to find evidence of trespassing (i.e., four-wheeler ruts) but these unauthorized activities have not impacted the integrity of the cap. Ruts have been filled. Signage and fences are inspected and repaired as needed to limit trespassing to the extent practicable.
- 2. Land use changes on site Remarks: <u>None</u>.
- 3. Land use changes off site Remarks: <u>None.</u>

VI. GENERAL SITE CONDITIONS

A. Roads \square Applicable \square N/A

1. Roads damaged	\Box Location shown on site map	🛛 Roads adequate	\Box N/A
Remarks: <u>No issue</u>	s observed, roads are repaired on an as-ne	eeded basis to provide acc	ess to the Sites.

B. Other Site Conditions

Remarks: <u>A downed tree from a landslide was observed on the land-side edge of the cap for Remnant</u> <u>Deposit 2.</u> The tree was subsequently removed, and GE reported no significant damage to the cap.

Inspection Roster				
Organization	Name			
EPA	Michael Cheplowitz			
EPA	Matt Wiener			
Arcadis on behalf of General				
Electric	Zachary Evans			

	VII. OVERALL OBSERVATIONS
А.	Implementation of the Remedy
	Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). Remarks: The remedy currently protects human health and the environment as the in-place containment and cap system prevents human exposure, and perimeter fencing and signage continue to be maintained. However, in order for the remedy to be protective in the long-term, an institutional control needs to be implemented to ensure that future use of remnant deposits does not compromise the integrity of the cap system or result in unsafe exposures. Containment of contaminated sediments is functioning as expected.
B.	Adequacy of System Operations
	Remarks: <u>None.</u>
	Describe issues and observations related to the implementation and scope of System Operation procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. Remarks: None.
C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of System Operations or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future. <u>Remarks: N/A</u>
D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.
	Remarks: The remnant deposits have typically been mowed twice per year, once in the spring and once in the fall. There may be advantages to only mowing once per year that include increased habitat for wildlife and potential to reduce costs and emissions associated with mowing. EPA and GE will discuss if this is practical, as an annual mowing is more difficult to complete and may not be practical. NYSDEC is supportive of reducing the mowing to once per year.

APPENDIX 6-1

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST OU1

ATTACHMENT A INSPECTION PHOTO LOG

Prepared by: USEPA



Photo 1. Remnant Deposit 1 (island and nearby shallows).



Photo 2. Remnant Deposit 2 with a fallen tree in the background.



Photo 3. Remnant Deposit 2 (facing northwest from Remnant Deposit 3).



Photo 4. Remnant Deposit 3 (facing north).



Photo 5. Remnant Deposit 3 (facing south).



Photo 6. Remnant Deposit 4 (facing southwest from Remnant Deposit 3).



Photo 7. Remnant Deposit 4.



Photo 8. Remnant Deposit 4 (facing south).



Photo 9. Remnant Deposit 5 (facing northeast from Rogers Island).

APPENDIX 6-2

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST OU2

Prepared by: USEPA

Five-Year Review Site Inspection Checklist – OU2

I. SITE INFORMATION				
Site name: Hudson River PCBs Superfund Site	Date of inspection: 10/5/2022			
Location and Region: New York, Hudson Falls to Battery in NYC	EPA ID: NYD980763841			
Agency, office, or company leading the five-year review: EPA Region 2	Weather/temperature: 70°F, cloudy with scattered/light rain			
Remedy Includes: (Check all that apply) ⊠ Landfill cover/containment (in-river caps) □ Access controls ⊠ Institutional controls □ Groundwater pump and treatment □ Surface water collection and treatment ⊠ Other: Dredging of contaminated sediments	Monitored natural attenuation/recovery □ Groundwater containment □ Vertical barrier walls			
Attachments:	□ Site map attached			
II. INTERVIEWS (Not Applicab	le - See Part 4 Other Interviews)			
1. System Operations site manager Name Title	Date			
Interviewed \Box at site \Box at office \Box by phone Phone Problems, suggestions; \Box Report attached	no			
 System Operations Staff	Title Date			

Agency		
Contact Name		
		Date Phone no.
Problems; suggestions; Report attached		
Agency		
Contact		
Contact Name	Title	Date Phone no.
Problems; suggestions; Report attached		
Agency		
Contact		
Name	Title	Date Phone no.
Problems; suggestions; Report attached		
Agency		
Contact		
Name	Title	Date Phone no.
Problems; suggestions; Report attached		
Other interviews (optional) Report attached		

	III. ON-SITE DOCUMENTS & F	RECORDS VERIFIED (Check all that apply	y)
1.	System Operations Documents			
	System Operations manual(s)	⊠ Readily available	\Box Up to date	\Box N/A
	⊠ As-built drawings	⊠ Readily available	\Box Up to date	\Box N/A
	⊠ Maintenance logs	Readily available	\Box Up to date	\Box N/A
	Remarks: <u>Documents produced by GE and</u> field office located at 187 Wolf Road, Alba			
	EPA. In 2021 EPA began the process of op	-		
	documented in the long-term OM&M work	<u>x plan.</u>		

2.	Site-Specific Health and Safety Plan ☐ Contingency plan/emergency response pla Remarks: Community Health and Safety Pla	•	⊠ Up to date ⊠ Up to date	□ N/A □ N/A
3.	System Operations and OSHA Training F Remarks	Records □ Readily availa	ble □ Up to	o date ⊠N/A
4.	Permits and Service Agreements			
	\Box Air discharge permit	□ Readily available	\Box Up to date	🖾 N/A
	Effluent discharge	□ Readily available	\Box Up to date	🖾 N/A
	□ Waste disposal, POTW	□ Readily available	\Box Up to date	🖾 N/A
	□ Other permits: □ Readily availabl Remarks:	le \Box Up to date \boxtimes N/A	-	
6.	Discharge Compliance Records			
	□Air	□ Readily available	\Box Up to date	🖾 N/A
	□ Water (effluent) Remarks:	□ Readily available	\Box Up to date	X N/A
7.	Daily Access/Security Logs Remarks:	□ Readily available	\Box Up to date	🖾 N/A

IV. SYSTEM OPERATIONS COSTS

1.	System Operations Organization	tion
	□ State in-house	\Box Contractor for State
	☑ PRP in-house	⊠ Contractor for PRP
	□ Federal Facility in-house	□ Contractor for Federal Facility
	□ Other	
	Remarks: Handled by GE and t	heir contractors.

2.	 System Operations Cost Records ☑ N/A □ Readily available □ Up to date ☑ Funding mechanism/agreement in place (GE performing remedy, including O&M, pursuant to 2006 consent decree with the United States) Original System Operations cost estimate □ Breakdown attached Total annual cost by year for review period if available 						
	From	To			_ □ Breakdown attached		
	Date From	To	Date	Total cost	□ Breakdown attached		
	Date From	To	Date	Total cost	□ Breakdown attached		
	Date From	To	Date	Total cost	□ Breakdown attached		
	Date From	To	Date	Total cost	_ □ Breakdown attached		
	Date		Date	Total cost			
	V. ACCESS AND INSTITUTIONAL CONTROLS X Applicable DN/A						
A. Fer	ncing						
1.	1. Fencing damaged □ Location shown on site map □ Gates secured ⊠ N/A Remarks:						
B. Oth	ner Access Restr	ctions					
1.	Signs and other security measures □ Location shown on site map □ N/A Remarks: Fishing advisory signs along the Hudson River are checked regularly and replaced as needed.						
C. Ins	C. Institutional Controls (ICs)						

1.	Implementation and enforcement						
	Site conditions imply ICs not properly implemented	□ Yes	🛛 No	\Box N/A			
	Site conditions imply ICs not being fully enforced	□ Yes	🛛 No	\Box N/A			
	Type of monitoring (e.g., self-reporting, drive by) Drive-by						
	Enforcement: Fishing license and/or enrollment in the recreational marine fishing registry required to						
	fish in the Hudson River. New York State Department of Health (NYSDOH) issues fish advisories and						
	New York State Department of Environmental Conservation (NYSDEC) issues regulations for fishing in						
	<u>the Hudson River.</u> Frequency: <u>Continuous</u>						
	Responsible party/agency: <u>EPA, NYSDOH and NYSDEC.</u>						
	Contact: Bridget Boyd NYSDOH Public Health Specialist		(518) 40	02-7860			
	David Tromp NYSDEC Section Chief		(518) 76				
	Name Title	Dat	e Phone	e no.			
	Reporting is up-to-date	🛛 Yes	\Box No	\Box N/A			
	Reports are verified by the lead agency	🛛 Yes	□ No	\Box N/A			
	Specific requirements in deed or decision documents have been met	🛛 Yes	□ No	\Box N/A			
	Violations have been reported	□ Yes	□ No	🖾 N/A			
	Other problems or suggestions:		ort attach	led			
	NYSDOH maintains an outreach program to inform the public about	1					
	discussion of this program is included in Appendix 8.						
2.	Adequacy \boxtimes ICs are adequate \Box ICs are inadequate \Box N/ARemarks:Advisories and restrictions in place, exposures to public are being controlled. However, there is evidence that some anglers disregard the advisories and restrictions and consume fish from the Hudson River.						
D. General							
1.	Vandalism/trespassing \Box Location shown on site map \Box No we Remarks Signs are checked regularly, if reported missing, signs are re-	vandalism eplaced.	evident				
2.	Land use changes on site 🖾 N/A Remarks						
3.	Land use changes off site 🖾 N/A Remarks						
4.	4. Implementation of fish consumption advisories Remarks: <u>Advisories and restrictions are in place</u> . NYSDOH continues to make regular updates to the <u>outreach program</u> .						
5. Implementation of fishing restrictions Remarks: <u>NYSDEC regulations include catch and release only for the Hudson River from the Troy Dam</u> <u>upstream to Bakers Falls in the village of Hudson Falls and tributaries in this section to first barrier impassable by</u> <u>fish, including Mohawk River below the Route 32 bridge.</u>							
	VI. GENERAL SITE CONDITIONS						
A. Roa	ads \Box Applicable \boxtimes N/A						

 \Box Location shown on site map

Roads damaged

Remarks:

1.

🛛 N/A

 \Box Roads adequate

B. Inspections (Not Applic Name (nearby location)	Inspection Date	Purpose of Site	Identified Incomplete or Deficient Items	Follow Up
North Rogers Island	10/5/2022	Site of Former Fort Edward Dam, and a water quality sampling location	None	N/A
CUs 0 and 1	10/5/2022	Dredging location at northern end of site.	None	N/A
TD1 Fish Station	10/5/2022	Annual fish sampling location	None	N/A
Moreau Launch	10/5/2022	Barge loading area for fill and cap materials	None	N/A
TD2 Fish Station	10/5/2022	Annual fish sampling location	None	N/A
TD3 Fish Station	10/5/22	Annual fish sampling location	None	N/A
TD4 Fish Station	10/5/22	Annual fish sampling location	None	N/A
TD5 Spring fish station	10/5/22	Annual fish sampling location	None	N/A
TD5 Fall fish station South Griffin Island	10/5/22	Annual fish sampling location	None	N/A
riverine fringing wetland reconstruction	10/5/22	Riverine fringing wetland reconstruction area	None	N/A
ND3 Fish station	10/5/22	Annual fish sampling location	None	N/A
NYSDEC Hotspot 28	10/5/22	Habitat reconstruction area.	None	N/A

Inspection Roster				
Organization	Name			
EPA	Daniel Wiener			
EPA	Michael Cheplowitz			
WSP	Michael Traynor			
WSP	Juliana Atmadja			
WSP	Solomon Gbondo-Tugbawa			
WSP	Kenneth Takagi			
Anchor QEA	Ryan Davis			

VII. OVERALL OBSERVATIONS			
A.	Implementation of the Remedy		
	Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). The goals of the remedy are to reduce the risks to humans and ecological receptors by reducing PCB levels in fish and to minimize the downstream transport of PCBs by reducing PCB concentrations in river sediments through dredging, capping, and monitored natural attenuation. Dredging as prescribed in the Record of Decision (ROD) has been completed and backfill has been completed. Habitat reconstruction has been completed and is being monitored for benchmark and success criteria. Monitoring of natural recovery in water, fish, and sediment will continue. Fish data will be assessed against the remediation targets and the remediation goal as defined in the ROD.		
B.	Adequacy of System Operations		
	Describe issues and observations related to the implementation and scope of System Operation procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. Land-based facilities have been demobilized and restored. OM&M sediment sampling commenced in the fall of 2021. EPA is reviewing GE's updated OM&M plan, which was submitted in 2022. OM&M plans are being reviewed on an ongoing basis. OM&M for Phase 1 and Phase 2 caps and habitat is ongoing. Reconstructed wetlands were observed on previously dredged and capped portions of the river bottom. Additional planting and habitat construction and maintenance items measures were discussed and implemented for the program. Sediment cap integrity was not assessed during the inspection, but a cap assessment is included in Appendix 4 of this five-year review.		
C.	Early Indicators of Potential Remedy Problems		
	Describe issues and observations such as unexpected changes in the cost or scope of System Operations or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future. Data collection for OM&M underway (i.e., sediment, fish, water). Data are being reviewed as they are received. No problems have been noted to date.		
D.	Opportunities for Optimization		
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. <u>A new iteration of the OM&M plan is being implemented</u> . The scope for the OM&M program is under continuous review with an adaptive approach for updates and revisions. Variability (in year and year to year) in water, fish, and sediment datasets presents a large challenge for assessing the remedy as part of OM&M. Additional adjustments to the monitoring program may be made as necessary in the future.		

APPENDIX 6-2

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST OU2

ATTACHMENT A INSPECTION PHOTO LOG

Prepared by:

USEPA



Photo 1. Water column sampling location north of Rogers Island. Remnant Deposit 5 is visible in the background.



Photo 2. Location of CUs 0 and CU 1, where silting in after dredging was observed.



Photo 3. Cove in CU8 that is included in the TD1 fish sampling area.



Photo 4. TD1 fish sampling location and CU6 (looking south).



Photo 5. NYSDEC Moreau launch and loading area during dredging (Reach 8).



Photo 6. TD2 fish sampling area. A short-term response action (shoreline stone placement) is visible along the shoreline in the background as part of the Hudson River floodplain program.



Photo 7. TD3 fish sampling location near the confluence with Snook Kill.



Photo 8. Fish sampling location TD4.



Photo 9. Fish sampling location TD5 along West Griffin Island.



Photo 10. Reconstructed wetland at the southern tip of Griffin Island.



Photo 11. Fish sampling location ND3.



Photo 12. NYSDEC Hotspot 28, which was identified as a high-priority dredging area. A monitored habitat construction area was established on top of the fill.



Photo 13. The southern extent of NYSDEC Hotspot 28.



Photo 14. Fish sampling location ND4.



Photo 15. Fish sampling location ND5 with a wetland reconstruction area in the background.



Photo 16. The Schuylerville Dix Bridge water column sampling location.



Photo 17. Fish sampling location SW1.



Photo 18. Fish sampling location SW2.



Photo 19. Fish sampling location SW3.