APPENDIX 6 FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

Prepared by:

USEPA

July 2024

APPENDIX 6-1 FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST OU1

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Five-Year Review Site Inspection Checklist – OU1

I. SITE INFORMATION			
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		
Remedy Includes: (Check all that apply)			
Attachments: Inspection team roster attached	☑ Site map attached		
II. INTERVIEWS (Not Applica	able - See Part 4 Other Interviews)		
1. System Operations Site Manager Name Title Interviewed □ at site □ at office □ by phone Phone	Date		
Problems, suggestions; Report attached	IIO		
2. System Operations Staff	Title Date		

3.	Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.			
	Agency			
	Contact Name	Title	Date P	Phone no.
	Problems; suggestions; □ Report attached _			
	Agency			
	ContactName	Title	Date P	Phone no.
	Problems; suggestions; ☐ Report attached			
	Agency			
	Contact Name	Title	Data E	Phone no.
	Problems; suggestions; Report attached	Title		
	Agency Contact			
	Name Problems; suggestions; □ Report attached _	Title	Date F	
4.	Other interviews (optional) □ Report attack	hed.		
	gs between Environmental Protection Agency weekly basis over the past five years.			
	LOVER DOCUMENTS A DECORDO VIDO	TEVED (CL. 1. 11.1.	1.	
	N-SITE DOCUMENTS & RECORDS VER	IFIED (Check all that app	oly)	
1.	System Operations Documents	⊠D 1'1 '1.11	N 1	
	✓ System Operations manual(s)✓ As-built drawings	☑ Readily available☑ Readily available	⊠Up to da ⊠ Up to da	
	8	•		
	Maintenance logs Remarks: <u>Documents produced by GE are p</u>	☑ Readily available rovided to EPA.	⊠ Up to da	ate □ N/A
2.	Site-Specific Health and Safety Plan	⊠ Readily available		
Remort	☐ Contingency plan/emergency response plans: GE maintains Health and Safety Plans for	-	□ Up to dat	te ⊠ N/A
			= 3	TT 4 1 4 5
3.	System Operations and OSHA Training F	Records □ Readily availal	ble 🗆	Up to date ⊠
	Remarks			N/A

4.	Permits and Ser	vice Agreemen	nts			
	□Air discharge permit □ Readily available □ Up to date ☑ N			⊠ N/A		
	☐ Effluent discha	arge	□ Readily ava	ilable □ U	Jp to date	⊠ N/A
	☐ Waste disposal	l, POTW	□ Readily ava	ailable □ U	Jp to date	⊠ N/A
	☐ Other permits:		☐ Readily available	☐ Up to date	e ⊠ N	/A
	Remarks:					
6.	Discharge Comp	pliance Record				
	□ Air		□ Readily ava		Jp to date	⊠ N/A
	□ Water (effluent	t)	☐ Readily av	ailable □ U	Jp to date	⊠ N/A
	Remarks:					
7.	Daily Access/Sec		□ Readily ava		Jp to date	⊠ N/A
	Remarks: Access	s is controlled an	nd restricted with fences su	irrounding depoi	<u>sits.</u>	
		IV	SYSTEM OPERATIONS	S COSTS		
-	G 1 0 11			3 CO313		
1.	System Operation ☐ State in-house	ons Organizati	on ☐ Contractor for State			
	□ State in nouse □ PRP in-house		☐ Contractor for PRP			
	☐ Federal Facility		☐ Contractor for Feder			
	□ Other			Ž		
	Remarks: OM&N	M is performed l	by GE and overseen by EP	<u>A.</u>		
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 1990 consent decree with the United States) Original System Operations cost estimate □ Breakdown attached					_
		Total annua	l cost by year for review p	eriod if available	e	
	From	То		□ Breakdow	n attached	
	Date	Date	Total cost	_		
	From	_ To		_ □ Breakdow	n attached	
	Date From	Date To	Total cost	□ Breakdow	n attached	
	Date	_ 10 Date	Total cost	_ breakdow	ii attaciicu	
	From	_ To		_ □ Breakdow	n attached	
	Date	Date	Total cost			
	FromDate	_ To Date	Total cost	_ □ Breakdow	n attached	
	Date	Date	Total Cost			
	V. ACC	CESS AND IN	STITUTIONAL CONTR	OLS X Applic	able □ N/A	Λ
A. Fen	ncing					
1.	Fencing damage	ed □ Loc	cation shown on site map	☐ Gates sect	ured ⊠1	N/A
			n the fall and spring of each			
B. Oth	B. Other Access Restrictions					

1. Signs and other secur Remarks: OU1 remnar	rity measures Location shown on site map N/A nt 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	3)			
identified institutional properties to uses and unacceptable risks of e	enforcement d not identify institutional controls for the remnant deposits. However, EPA has controls that should be implemented to restrict future use of the remnant activities that would not compromise the integrity of the cap system or result in exposures to contaminants. EPA, New York State, and GE are researching ant sites so that an appropriate institutional control can be implemented.			
2. Adequacy □ IC Remarks: <u>See Above.</u>	s are adequate \square ICs are inadequate \square N/A			
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 Remarks: None.	•			
3. Land use changes off Remarks: None.	site			
	VI. GENERAL SITE CONDITIONS			
A. Roads ⊠ Applicabl	e □ N/A			
1. Roads damaged Remarks: No issues of	1. Roads damaged □ Location shown on site map ⊠ Roads adequate □ N/A Remarks: No issues observed, roads are repaired on an as-needed basis to provide access to the Sites.			
B. Other Site Conditions				
Remarks: A downed tree from a landslide was observed on the land-side edge of the cap for Remnant Deposit 2. The tree was subsequently removed, and GE reported no significant damage to the cap.				
Inspection Roster				
Organization EPA	Name Michael Cheplowitz			
EPA Arcadis on behalf of General	Matt Wiener			

Zachary Evans

Electric

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.).

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: None.

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.

Remarks: N/A

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:

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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

July 2024

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: ⊠ Inspection team roster attached	☐ Site map attached		
II. INTERVIEWS (Not Applicab	le - See Part 4 Other Interviews)		
1. System Operations site manager			
Name Title Date Interviewed □ at site □ at office □ by phone Phone no Problems, suggestions; □ Report attached			
2. System Operations Staff Name Interviewed □ at site □ at office □ by phone Phone Problems, suggestions; □ Report attached	Title Date		

3.	Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.			
	Agency			
	Contact Name			
	Name Problems; suggestions; □ Report attached		Date Phone no.	
	Agency			
	Contact Name	Title	Date Phone no.	
	Problems; suggestions; Report attached			
	Agency			
	Contact Name	Title	Date Phone no.	
	Problems; suggestions; Report attached			
	Agency Contact			
	Name Problems; suggestions; □ Report attached	Title	Date Phone no.	
4.	Other interviews (optional) Report attached.			
	gs between EPA and GE have occurred on a reguleracts with GEs contractors during work.	ar basis over the pa	st five years, EPA oversees GEs work	

	III. ON-SITE DOCUMENTS	& RECORDS VERIFIED (Check all that apply)	
1.	System Operations Documents			
		☑ 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	\square Up to date \square N/A	
	Remarks: <u>Documents produced by GF</u> field office located at 187 Wolf Road,	and its contractors are provid Albany, New York, Electroni	ed to EPA and are kept at the EPA c records are also kept and stored	<u>\</u> bv
	EPA. In 2021 EPA began the process of			
	documented in the long-term OM&M			
		*		

2.	Site-Specific Health and Safety Plan Contingency plan/emergency response plan/emarks: Community Health and Safety I		-	□ N/A □ N/A
3.	System Operations and OSHA Training Remarks	g Records □ Readily availa	able □ Up	to date ⊠N/A
4.	Permits and Service Agreements ☐ Air discharge permit ☐ Effluent discharge ☐ Waste disposal, POTW ☐ Other permits: ☐ Readily avails Remarks:	□ Readily available □ Readily available □ Readily available able □ Up to date 図 N/A	☐ Up to date ☐ Up to date ☐ Up to date	⊠ N/A ⊠ N/A ⊠ N/A
 7. 	Discharge Compliance Records ☐ Air ☐ Water (effluent) Remarks: Daily Access/Security Logs Remarks:	□ Readily available □ Readily available □ Readily available	☐ Up to date ☐ Up to date ☐ Up to date	⊠ N/A ⊠ N/A ⊠ N/A
	IV CVCTEN	4 OPERATIONS COSTS		
1.	System Operations Organization ☐ State in-house ☐ Cor ☐ PRP in-house ☐ Cor	ntractor for State atractor for PRP atractor for Federal Facility		

⊠ N/A □ F ⊠ Funding me consent decree w	v i				
From	To		☐ Breakdown attached		
Date From_		Total cost	☐ Breakdown attached		
Date From	Date To	Total cost	□ Breakdown attached		
Date From	Date To	Total cost	– □ Breakdown attached		
Date From	Date To	Total cost	– □ Breakdown attached		
Date	Date	Total cost			
V. ACCESS AND INSTITUTIONAL CONTROLS X Applicable □ N/A					
A. Fencing					
1. Fencing damaged □ Location shown on site map □ Gates secured ⋈ N/A Remarks:					
B. Other Access Restric	etions				
o o	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. Institutional Control	s (ICs)				

1.	Implementation and enfor	cement				
	Site conditions imply ICs no	ot properly implemented	□ Yes ⊠ No	□ N/A		
	Site conditions imply ICs no	ot being fully enforced	□ Yes ⊠ No	□ N/A		
		lf-reporting, drive by) <u>Drive-by</u>				
		Enforcement: Fishing license and/or enrollment in the recreational marine fishing registry required to				
		ew York State Department of Health (NY				
		t of Environmental Conservation (NYSD	EC) issues regulat	ions for fishing in		
	the Hudson River. Frequency: Continuous					
		EPA, NYSDOH and NYSDEC.				
		NYSDOH Public Health Specialist	(518) 4	02-7860		
		VYSDEC Section Chief		64-2401		
	Name	Title	Date Phon			
	Reporting is up-to-date		⊠ Yes □ No	□ N/A		
	Reports are verified by the l	ead agency	⊠ Yes □ No	□ N/A		
	•	ed or decision documents have been met	⊠ Yes □ No	□ N/A		
	Violations have been report		□ Yes □ No	⊠ N/A		
	Other problems or suggestic		☑ Report attac			
	1 00	reach program to inform the public about	-			
	discussion of this program i		tire day isolies and	Testifetions. 71		
_	•		,	_ N/A		
2.	* v	☑ ICs are adequate ☐ ICs are inade	•	□ N/A		
		restrictions in place, exposures to public a				
	Hudson River.	ers disregard the advisories and restriction	ns and consume his	n from the		
_						
D.	General					
1.	Vandalism/trespassing	Location shown on site map	vandalism evident			
	Remarks Signs are checked	regularly, if reported missing, signs are r	eplaced.			
2.	Land use changes on site	▼ N/A				
۷.	Remarks	∆ IV/A				
3.	Land use changes off site	⊠ N/A				
	Remarks					
4.	Implementation of fish cor					
	Remarks: Advisories and re	estrictions are in place. NYSDOH continu	ues to make regula	r updates to the		
	outreach program.					
5.	Implementation of fishing restr	ictions				
Reı	marks: NYSDEC regulations incl	ude catch and release only for the Hudso	n River from the T	roy Dam		
		ge of Hudson Falls and tributaries in this	section to first barr	ier impassable by		
fish	, including Mohawk River below	the Route 32 bridge.				
		VI. GENERAL SITE CONDITION	ONS			
	A. Roads	⊠ N/A				
	1. Roads damaged	☐ Location shown on site map ☐	Roads adequate	⊠ N/A		
	Remarks:		2220 adoquato	1771		

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	10/5/22	Annual fish sampling location	None	N/A
South Griffin Island 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		

VIII. 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.

<u>Data collection for OM&M underway (i.e., sediment, fish, water). Data are being reviewed as they are received.</u> 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.

A new iteration of the OM&M plan is being implemented. 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.