

Appendix G  
Final Gasco Sediments Site Sufficiency  
Assessment Summary Tables

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**Table 6-1  
Recontamination Evaluation Summary – Upland Pathways Summary**

Site	ECSI No.	Pathway	Status <sup>1</sup>	Site-Specific and Media-Specific COCs	Milestone Document	Remedial Design/Source Control Task	Relative Magnitude Risk of Potential Recontamination
Gasco and Siltronic	84 and 183	Stormwater	NW Natural Property - A Siltronic Property - C(u)	<ul style="list-style-type: none"> <li>Metals</li> <li>PAHs</li> <li>TPH</li> </ul>	<ul style="list-style-type: none"> <li>Stormwater Source Control Measures and Performance Monitoring Work Plan (Anchor QEA 2018c)</li> <li>Stormwater Source Control Measures and Performance Monitoring Annual Progress Report (Anchor QEA 2019d)</li> <li>Stormwater Source Control Evaluation Report (Anchor QEA 2020c)</li> <li>Revised Stormwater Source Control Evaluation Report (MFA 2020a)</li> <li>Stormwater Source Control, NW Natural Gasco Site, ECSI #84; Draft (DEQ 2021)</li> </ul>	For the NW Natural property, sources of recontamination from stormwater outfalls discharging to the Willamette River are sufficiently controlled and do not pose a threat to the recontamination of sediments following the future in-water sediments remedy. For the Siltronic property, DEQ is reviewing the Revised Stormwater Source Control Evaluation Report (MFA 2020a), and the source control status is considered as not sufficiently controlled until DEQ makes its source control decision.	Low for both NW Natural and Siltronic Property Stormwater
		Direct Discharge	A	<ul style="list-style-type: none"> <li>Metals</li> <li>PAHs</li> </ul>	<ul style="list-style-type: none"> <li>DEQ File No. 62231, Permit No. 10534 (Gasco property LNG Plant non-contact cooling water annual discharge)</li> <li>NPDES Individual Permit No. 101128 (Siltronic GSA treated wastewater discharge)</li> <li>NPDES Individual Permit No. 103061 (Gasco property groundwater treatment plant discharge)</li> </ul>	Sources of recontamination from direct discharge of Gasco property LNG Plant non-contact cooling water (once annually), treated discharge from Siltronic GSA, and treated groundwater effluent from the Gasco property groundwater treatment plant to the Willamette River are sufficiently controlled and do not pose a threat to the recontamination of sediments following the future in-water sediments remedy.	Low
		Groundwater	Fill WBZ - B Alluvium WBZ - A	<ul style="list-style-type: none"> <li>Metals: arsenic and cadmium</li> <li>Pesticides: sum DDD, sum DDT, sum DDE, and Total DDx</li> <li>TPH: aliphatic hydrocarbons C10-C12</li> </ul>	<ul style="list-style-type: none"> <li>Remedial Investigation Report (HAI 2007)</li> <li>Revised Groundwater Source Control Construction Design Report (Anchor QEA 2012a)</li> <li>Human Health and Ecological Risk Assessment Report (Anchor QEA 2014)</li> <li>Interim Feasibility Study (Anchor QEA 2018b)</li> <li>Hydraulic Control and Containment System Performance and Monitoring Plan (Anchor QEA 2019h)</li> <li>Remedial Investigation/Human Health and Ecological Risk Assessment Addendum for the Siltronic GSA (Anchor QEA and HAI 2019)</li> </ul>	Sources of recontamination from Fill WBZ are partially controlled but will be fully controlled following the upland remedy to contain the Fill WBZ, as discussed in Section 4.3.5. An interim source control measure for the Fill WBZ is scheduled for completion in March 2021 and Fill WBZ sources will be controlled prior to or as part of the sediment/riverbank remedy. Groundwater discharge from the Alluvium WBZ is sufficiently controlled by operation of the current hydraulic control and containment system or a future equally or more effective system installed as part of the comprehensive upland remedy.	Low for Fill WBZ Groundwater Low for Alluvium WBZ Groundwater
		Upland DNAPL	B	<ul style="list-style-type: none"> <li>PAHs</li> <li>TPH: aliphatic hydrocarbons C10-C12</li> </ul>	<ul style="list-style-type: none"> <li>Letter to The River Mile 4-7 Group. Regarding River Mile 4-7 Group February 2, 2018 Letter (DEQ 2018)</li> <li>Interim Feasibility Study (Anchor QEA 2018b)</li> <li>NW Natural Gasco Site DNAPL Monitoring Semiannual Summary Report (January 1 through June 30, 2019) (Anchor QEA 2019h)</li> <li>NW Natural Gasco Site DNAPL Monitoring Semiannual Summary Report (July 1 through December 31, 2019) (Anchor QEA 2020d)</li> </ul>	DNAPL within the Gasco Upland Site has been extensively investigated for more than 20 years, and these investigations have shown no connection between DNAPL in the uplands and the Willamette River sediments. Upland DNAPL is passively or actively recovered from 18 nearshore monitoring wells and extraction wells. In addition, DNAPL has never accumulated in any of the 13 piezometers located at the base of the shoreline riverbank. Residual DNAPL in the uplands will be addressed through an upland remedy selected by DEQ and is not sufficiently mobile to migrate to the river prior to the upland cleanup. Therefore, upland DNAPL is considered sufficiently controlled subject to the selected remedy for the upland.	Low
		Riverbank Sources	B	None	<ul style="list-style-type: none"> <li>Final Project Area Identification Report and Data Gaps Quality Assurance Project Plan (Anchor QEA 2010b)</li> <li>Engineering Evaluation/Cost Estimate (Anchor QEA 2012b)</li> <li>Final Pre-Remedial Basis of Design Technical Evaluations Work Plan (Anchor QEA 2019a)</li> </ul>	Sources of recontamination will be sufficiently controlled by implementation of the future in-water sediments remedy.	Low
		Existing In-Water Structures and Overwater Activities	A	<ul style="list-style-type: none"> <li>Metals: arsenic and copper</li> <li>PCBs</li> <li>PAHs</li> </ul>	<ul style="list-style-type: none"> <li>PacTerm Oil Spill Contingency Plan (PacTerm 2018)</li> </ul>	The risk of recontamination from this pathway is considered low and sufficiently controlled as long as the existing BMPs and standard practices of care for overwater activities continue.	Low

**Table 6-1**  
**Recontamination Evaluation Summary – Upland Pathways Summary**

Notes:

1. Status is defined as follows: A = sources are sufficiently controlled or the transport pathway has been determined by DEQ to be incomplete or insignificant; B = sources are conditionally controlled, there is a plan and administrative process for controlling sources before or as a component of sediment remedy; C(u) = sources are not sufficiently controlled; C(a) = sources are not sufficiently assessed, for which there is some existing information but additional assessment is recommended to better understand the potential sediment recontamination risk from the pathway.

cPAH: carcinogenic polycyclic aromatic hydrocarbon

BEHP: bis(2-ethylhexyl)phthalate

BMP: best management practice

COC: contaminant of concern

DNAPL: dense nonaqueous phase liquid

DDD: dichlorodiphenyldichloroethane

DDE: dichlorodiphenyldichloroethylene

DDT: dichlorodiphenyltrichloroethane

DDx: the sum of DDD, DDE, and DDT

DEQ: Oregon Department of Environmental Quality

ECSI: Environmental Cleanup Site Information

GSA: geographic subarea

MFA: Maul Foster & Alongi, Inc.

N/A: not applicable

NPDES: National Pollutant Discharge Elimination System

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

SCM: source control measure

SVOC: semivolatile organic compound

TPH: total petroleum hydrocarbon

WBZ: water-bearing zone

**Table 6-2a**  
**In-Water Recontamination Evaluation Summary – Indirect Upland Pathways**

Pathway	Project Area	Site	ECSI No.	Status <sup>1</sup>	Site-Specific and Media-Specific COCs <sup>2</sup>	Milestone Document	Remedial Design/ Source Control Task	Relative Magnitude Risk of Potential Recontamination
<b>Near-Field In-Water Sources</b>								
Stormwater	B1a	• Brix Maritime (Foss)	• 2364	A	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	Ensure SCMs are in place and are implemented effectively. Ensure continued permit compliance.	Low
	US Moorings	• US Moorings Property • Advance American Construction (AAC; AKA Marine Finance)	• 1641 • 2352	• A (for US Moorings Property) • C(a) (for Highway 30 discharges to the US Moorings Project Area) • A for AAC	• Metals, PAHs, cPAH/BaPEq, Total PCBs, and Pesticides for US Moorings Property • Metals for AAC	• Anchor QEA, 2021. <i>Final Sufficiency Assessment - US Moorings Project Area</i> . January 22, 2021. • DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016. • DEQ 2021. <i>Notice of Civil Penalty Assessment and Order, Case No. WQ/SW-NWR-2020-161. To Advanced American Construction, Inc.</i> January 22, 2021.	• For US Moorings Property, ensure SCMs and BMPs are in place and are implemented effectively; ensure continued permit and SPPP compliance. • For Highway 30 discharges to US Moorings Project Area, ensure that the data gaps identified for the drainages that convey stormwater to WR-206 and WR-207 outfalls are addressed and ensure SCM for the Highway 30 area are implemented effectively. • For AAC, none	• Low (for US Moorings Property) • Unknown (Highway 30 discharges to the US Moorings Project Area) • Low for AAC <sup>3</sup>
	River Mile 7 West	• Siltronic (southern portion) • Arkema • StarLink Logistics Inc. (formerly Rhone Poulenc)	• 183 • 398 • 155	• B (for Siltronic - southern portion) • B (for Arkema) • C(u) (for StarLink Logistics Inc. -formerly Rhone Poulenc)	• Pesticides • Herbicides • chlorinated benzenes • VOCs • SVOCs • PCBs • Dioxin/Furans • Metals	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.6-3, 5.1, and 5.2 of DEQ's 2016 SCSR)	Low
	Willbridge Cove	• Kinder Morgan Willbridge Terminal • Chevron USA Terminal • Phillips 66 Terminal (Conoco Phillips)	• 160 • 25 • 177	• B (for Kinder Morgan Willbridge Terminal) • B (for Chevron USA Terminal) • A (for Phillips 66 Terminal)	• Pesticides • PAHs • LNAPL	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.6-3, 5.1, and 5.2 of DEQ's 2016 SCSR)	Low
Direct Discharges	B1a	• Brix Maritime (Foss)	• 2364	A	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	None	Low
	US Moorings	• US Moorings Property • Advance American Construction (AAC; AKA Marine Finance)	• 1641 • 2352	N/A	N/A	N/A	N/A	N/A
	River Mile 7 West	• Siltronic (northern portion) • Arkema • StarLink Logistics Inc. (formerly Rhone Poulenc)	• 183 • 398 • 155	A	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	None	Low
	Willbridge Cove	• Kinder Morgan Willbridge Terminal • Chevron USA Terminal • Phillips 66 Terminal (Conoco Phillips)	• 160 • 25 • 177	A	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	None	Low

**Table 6-2a**  
**In-Water Recontamination Evaluation Summary – Indirect Upland Pathways**

Pathway	Project Area	Site	ECSI No.	Status <sup>1</sup>	Site-Specific and Media-Specific COCs <sup>2</sup>	Milestone Document	Remedial Design/ Source Control Task	Relative Magnitude Risk of Potential Recontamination
Groundwater	B1a	• Brix Maritime (Foss)	• 2364	A	N/A (2016 DEQ SCSR did not identify specific COCs)	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.8-3 and 5.1 of DEQ's 2016 SCSR)	Low
	US Moorings	• US Moorings Property • Advance American Construction (AAC; AKA Marine Finance)	• 1641 • 2352	• C(a) (for US Moorings Property) • A for AAC	• Metals, PAHs, pesticides, and TPH for US Moorings Property • None for AAC	• Anchor QEA, 2020. <i>Final Sufficiency Assessment - US Moorings Project Area</i> . January 22, 2020. • DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	• For US Moorings Property, the existing groundwater dataset for the US Moorings Upland property is limited to the Fill WBZ hydrologic unit with limited spatial coverage of the US Moorings property. The data set is not adequate for evaluating the current recontamination potential for this pathway. The groundwater data gaps will need to be addressed to evaluate this direct upland pathway • For AAC, none	• Unknown (for US Moorings Property) • Low for AAC
	River Mile 7 West	• Siltronic (southern portion) • Arkema • StarLink Logistics Inc. (formerly Rhone Poulenc)	• 183 • 398 • 155	C(u)	• Pesticides • Herbicides • chlorinated benzenes • VOCs • SVOCs • PCBs • Dioxin/Furans • Metals	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.6-3, 5.1, and 5.2 of DEQ's 2016 SCSR)	Low
	Willbridge Cove	• Kinder Morgan Willbridge Terminal • Chevron USA Terminal • Phillips 66 Terminal (Conoco Phillips)	• 160 • 25 • 177	• B (for Kinder Morgan Willbridge Terminal) • B (for Chevron USA Terminal) • A (for Phillips 66 Terminal)	• Pesticides • PAHs • LNAPL	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.6-3, 5.1, and 5.2 of DEQ's 2016 SCSR)	Low
Riverbank Sources	B1a	• Brix Maritime (Foss)	• 2364	A	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	None	Low
	US Moorings	• US Moorings Property • Advance American Construction (AAC; AKA Marine Finance)	• 1641 • 2352	• C(a) (for US Moorings Property) • A for AAC	• Insufficient information for US Moorings Property • None for AAC	• Anchor QEA, 2020. <i>Final Sufficiency Assessment - US Moorings Project Area</i> . January 22, 2020. • DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	• For US Moorings Property, no data is currently available to assess the recontamination potential of the riverbank. Additional data for the riverbank area including sampling and analysis of erodible riverbank surface soils and subsurface riverbank angle borings will be conducted as part of the pre-design investigation PDIWP (Anchor QEA 2020a). The riverbanks will be addressed as part of the Project Area sediment remedy • For AAC, none	• Unknown (for US Moorings Property) • Low for AAC
	River Mile 7 West	• Siltronic (southern portion) • Arkema • StarLink Logistics Inc. (formerly Rhone Poulenc)	• 183 • 398 • 155	C(u)	• Pesticides • Herbicides • chlorinated benzenes • VOCs • SVOCs • PCBs • Dioxin/Furans • Metals	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.6-3, 5.1, and 5.2 of DEQ's 2016 SCSR)	Medium
	Willbridge Cove	• Kinder Morgan Willbridge Terminal • Chevron USA Terminal • Phillips 66 Terminal (Conoco Phillips)	• 160 • 25 • 177	• A (for Kinder Morgan Willbridge Terminal) • A (for Chevron USA Terminal) • A (for Phillips 66 Terminal)	• Pesticides • PAHs • LNAPL	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.6-3, 5.1, and 5.2 of DEQ's 2016 SCSR)	Low

**Table 6-2a**  
**In-Water Recontamination Evaluation Summary – Indirect Upland Pathways**

Pathway	Project Area	Site	ECSI No.	Status <sup>1</sup>	Site-Specific and Media-Specific COCs <sup>2</sup>	Milestone Document	Remedial Design/ Source Control Task	Relative Magnitude Risk of Potential Recontamination
Existing In-Water Structures and Overwater Activities	B1a	• Brix Maritime (Foss)	• 2364	A	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	None	Low
	US Moorings	• US Moorings Property • Advance American Construction (AAC; AKA Marine Finance)	• 1641 • 2352	A for US Moorings Property and AAC	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	• For US Moorings Property, no additional SCMs are required. Docks A and B are currently inactive and the small boat basin only moors small survey boats under short-term conditions and no fueling is conducted at this location • For AAC, none	• Low (for US Moorings Property) • Low for AAC
	River Mile 7 West	• Siltronic (southern portion) • Arkema • StarLink Logistics Inc. (formerly Rhone Poulenc)	• 183 • 398 • 155	A	None	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	None	Low
	Willbridge Cove	• Kinder Morgan Willbridge Terminal • Chevron USA Terminal • Phillips 66 Terminal (Conoco Phillips)	• 160 • 25 • 177	• B (for Kinder Morgan Willbridge Terminal) • B (for Chevron USA Terminal) • B (for Phillips 66 Terminal)	• Pesticides • PAHs • LNAPL	DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016.	See Appendix E (Tables 4.6.6-3 , 5.1, and 5.2 of DEQ's 2016 SCSR)	Low
<b>Far-Field In-Water Sources</b>								
Far-Field In-Water Sources (All Pathways) <sup>4</sup>	All Far-Field (see Section 5.1.2)	All Far-Field (see Section 5.1.2)	See DEQ's 2016 SCSR	See Section 5.7.1	Varies by Upland Site	• DEQ, 2016c. <i>Portland Harbor Upland Source Control Summary Report</i> . November 21, 2014 – Updated March 25, 2016. • GSI, 2020. <i>Willamette Cove Sufficiency Assessment</i> . Prepared for the Willamette Cove In-Water Remedial Design Group. June 2020.	See Appendix E (Various Tables in DEQ's 2016 SCSR)	Low
<b>Harbor-Wide Stormwater Sources</b>								
Harbor-Wide Stormwater Sources	See Section 5.1.3	See Section 5.1.3	—	See Section 5.7.1	Varies	• DEQ, 2020c. <i>Portland Harbor Stormwater Strategy Update – Status of Recontamination Prevention</i> . March 2020. • DEQ, 2020b. <i>City of Portland's Staff Report: Proposed Source Control Decision – City of Portland Outfalls Project in Portland Harbor</i> . April 2020. • Herrera, 2020. <i>2018-2019 (Year 2) Annual Report: Effectiveness Monitoring and Stormwater Source Control Evaluation: ODOT Facility in Portland Harbor Project Area</i> . Prepared for ODOT. March 2020.	None	Medium

**Table 6-2a**  
**In-Water Recontamination Evaluation Summary – Indirect Upland Pathways**

Notes:

1. Status is defined as follows: A = sources are sufficiently controlled or the transport pathway has been determined by DEQ to be incomplete or insignificant; B = sources are conditionally controlled; C(u) = sources are not sufficiently controlled; C(a) = sources are not sufficiently assessed, for which there is some existing information but additional assessment is recommended to better understand the potential sediment recontamination risk from the pathway.
2. Data for the various COCs are not presented in the 2016 DEQ Upland Source Control Summary Report and, therefore, have not be screened against applicable ROD Table 17 CULs or ROD Table 21 RALs and PTW-highly toxic thresholds for the various media.
3. However, as discussed in Section 5.1.1.3.2, since the submittal of the US Moorings Project Area Final Sufficiency Assessment (Anchor QEA 2021) in January 2021, DEQ issued on January 22, 2021 a Notice of Civil Penalty Assessment and Order (Appendix D) to AAC for violating the conditions in the NPDES Permit 1200Z by "...failing to include five stationary storage barges as discharge points in your Stormwater Pollution Control Plan (SWPCP) and by failing to monitor stormwater that discharges from the barges directly to the Willamette River..." (DEQ 2021 ). The Notice states that the barges are used to store steel and scrap metal.
4. As discussed in Section 5.1.2, there are additional far-field sources that can impact various far-field project areas that can lead to potential recontamination of the Project Area based on sediment transport mechanisms discussed in Section 3.3. These far-field sources are not summarized in this table because there is no evidence that these far-field indirect upland sources directly recontaminate the Project Area. These pathways are summarized in Section 5.7.4.

BaPEq: benzo(a)pyrene equivalent

cPAH: carcinogenic polycyclic aromatic hydrocarbon

COC: contaminant of concern

DDx: the sum of DDD, DDE, and DDT

DEQ: Oregon Department of Environmental Quality

EPA: U.S. Environmental Protection Agency

HxCDF: 1,2,3,7,8,9-hexachlorodibenzofuran

N/A: not applicable

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

PeCDD: pentachlorodibenzo-p-dioxin

PeCDF: pentachlorodibenzofuran

PTW: principal threat waste

RAL: remedial action level

SCM: source control measure

TCDD: 2,3,7,8-tetrachlorodibenzo-p-dioxin

TCDF: 2,3,7,8-tetrachlorodibenzofuran

**Table 6-2b**  
**In-Water Recontamination Evaluation Summary – In-Water Pathways**

Pathway	Plan B Boundary	Project Area	Status <sup>1</sup>	ROD Table 21 RAL and PTW-Highly Toxic Threshold Exceedances	Remedial Design/Source Control Task	Relative Magnitude Risk of Potential Recontamination
<b>Near-Field In-Water Sources</b>						
Suspended Sediments in Surface Water (Sediment Trap Data)	N/A	N/A	A	None	Review data from any future sediment traps collected prior to construction.	Low
Depositional Sediment Within Project Area	N/A	N/A	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8 PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	None	Medium-High
Sediment Resuspension	B1	Gasco Sediments Site	A	None	Sources of recontamination will be sufficiently controlled by implementation of the future in-water sediments remedy.	Low
Sediment Erosion and Remediation Dredging Impacts	B1	B1a	C(u)	<ul style="list-style-type: none"> <li>• Total PAHs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	High
		Navigation Channel	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,7,8 PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	High
		US Moorings	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	High
	B2	River Mile 7 West	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,4,7,8-PeCDF</li> <li>• 2,3,7,8-TCDD</li> <li>• 2,3,7,8-TCDF</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	High
		Willbridge Cove	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PCBs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	High
	B6	Unassigned SMAs	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	High



**Table 6-2b**  
**In-Water Recontamination Evaluation Summary – In-Water Pathways**

Pathway	Plan B Boundary	Project Area	Status <sup>1</sup>	ROD Table 21 RAL and PTW-Highly Toxic Threshold Exceedances	Remedial Design/Source Control Task	Relative Magnitude Risk of Potential Recontamination
<b>Far-Field In-Water Sources</b>						
Suspended Sediments in Surface Water (Sediment Trap Data)	N/A	N/A	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	Review data from any future sediment traps collected prior to construction.	Medium
Sediment Erosion and Remediation Dredging Impacts	B1	B1a	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
		Navigation Channel	C(u)	<ul style="list-style-type: none"> <li>• Total PAHs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
	B2	Willbridge Cove	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
	B3	River Mile 9 West	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
		River Mile 10 West	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PCBs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High

**Table 6-2b**  
**In-Water Recontamination Evaluation Summary – In-Water Pathways**

Pathway	Plan B Boundary	Project Area	Status <sup>1</sup>	ROD Table 21 RAL and PTW-Highly Toxic Threshold Exceedances	Remedial Design/Source Control Task	Relative Magnitude Risk of Potential Recontamination
Sediment Erosion and Remediation Dredging Impacts	B4	River Mile 10 East	C(u)	<ul style="list-style-type: none"> <li>• Total PAHs</li> <li>• Total PCBs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
		River Mile 11 East	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
		Unassigned SMAs	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,7,8-PeCDD</li> <li>• Total PCBs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
	B5	Unassigned SMAs	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
		B6	Willamette Cove	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.
	Unassigned SMAs		C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
	B7	Terminal 4	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• cPAH/BaPEq</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
		Unassigned SMAs	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High

**Table 6-2b  
In-Water Recontamination Evaluation Summary – In-Water Pathways**

Pathway	Plan B Boundary	Project Area	Status <sup>1</sup>	ROD Table 21 RAL and PTW-Highly Toxic Threshold Exceedances	Remedial Design/Source Control Task	Relative Magnitude Risk of Potential Recontamination
Sediment Erosion and Remediation Dredging Impacts	B8	River Mile 2 East Project Area	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High
		River Mile 3.5 East Project Area	C(u)	<ul style="list-style-type: none"> <li>• 1,2,3,4,7,8-HxCDF</li> <li>• 1,2,3,7,8-PeCDD</li> <li>• 2,3,7,8-TCDD</li> <li>• Total PAHs</li> <li>• Total PCBs</li> <li>• Total DDx</li> </ul>	This site is being evaluated under EPA oversight. Review progress on this site during RD.	Medium-High

Notes:

1. Status is defined as follows: A = sources are sufficiently controlled or the transport pathway has been determined by DEQ to be incomplete or insignificant; B = sources are conditionally controlled; C(u) = sources are not sufficiently controlled; C(a) = sources are not sufficiently assessed, for which there is some existing information but additional assessment is recommended to better understand the potential sediment recontamination risk from the pathway.

- BaPEq: benzo(a)pyrene equivalent
- cPAH: carcinogenic polycyclic aromatic hydrocarbon
- COC: contaminant of concern
- DDx: the sum of DDD, DDE, and DDT
- DEQ: Oregon Department of Environmental Quality
- EPA: U.S. Environmental Protection Agency
- HxCDF: 1,2,3,7,8,9-hexachlorodibenzofuran
- N/A: not applicable
- PAH: polycyclic aromatic hydrocarbon
- PCB: polychlorinated biphenyl
- PeCDD: pentachlorodibenzo-p-dioxin
- PeCDF: pentachlorodibenzofuran
- PTW: principal threat waste
- RAL: remedial action level
- RD: remedial design
- TCDD: 2,3,7,8-tetrachlorodibenzo-p-dioxin
- TCDF: 2,3,7,8-tetrachlorodibenzofuran