Table 2.2-5
RAO 2 PRG Derivation
Portland Harbor Superfund Site
Portland, Oregon

	RAO 2 **Reduce cancer risk and noncancer hazards for people eating fish and shellfish, including infants exposed by being breastfed by mothers who have consumed fish and shellfish, by reducing the concentrations of COCs in sediments, riverbank soils, surface water, and biota at the site to the proposed remediation goals.**												
	Tissue (fillet)					**Sediment**						**Surface Water**	
COCs	**Units**	**Risk-based PRGs (10-6)**	**Risk-based PRGs (HQ=1)**	**ARAR**	**PRG**	**Units**	**Risk-based PRG (10-6)**	**Risk-based PRG (HQ=1)**	**ARAR**	**Background**	**PRG**	**Units**	**PRG[1] (10^{-6})**
Arsenic	mg/kg	0.001	0.08	NA	0.001	mg/kg	NA	NA	NA	3	NA	µg/L	2.1[3]
Mercury	mg/kg	--	26[4]	0.03[4]	0.03[4]	mg/kg	NA	NA	NA	0.034	NA	µg/L	NA
Aldrin	µg/kg	0.06	8	NA	0.06	µg/kg	2	260	NA	NA	2	µg/L	0.000005
Bis-2-Ethylhexyphthalate	µg/kg	72	5,246	NA	72	µg/kg	NA	NA	NA	61	NA	µg/L	NA
Chlordanes	µg/kg	3	131	NA	3	µg/kg	1.5	181	NA	0.6	1.5	µg/L	0.000081
DDx	µg/kg	3	94	NA	3	µg/kg	6.1	307	NA	3	6.1	µg/L	0.000031[2]
Dieldrin	µg/kg	0.06	13	NA	0.06	µg/kg	1.8	40	NA	NA	1.8	µg/L	0.0000054
1,2,3,4,7,8-HxCDF	µg/kg	0.00008	0.00006	NA	0.00006	µg/kg	0.0003	0.00023	NA	NA	0.00023	µg/L	0.00000000051
1,2,3,7,8-PeCDD	µg/kg	0.000008	0.000006	NA	0.000006	µg/kg	0.00001	0.00001	NA	0.00013[5]	0.00001[6]	µg/L	0.00000000051
2,3,4,7,8-PeCDF	µg/kg	0.00003	0.00002	NA	0.00002	µg/kg	0.0004	0.0003	NA	0.00019[5]	0.0003	µg/L	0.00000000051
2,3,7,8-TCDD	µg/kg	0.000008	0.000006	NA	0.000006	µg/kg	0.0000064	0.000005	NA	0.00014[5]	0.000005[6]	µg/L	0.00000000051
2,3,7,8-TCDF	µg/kg	0.00008	0.00006	NA	0.00006	µg/kg	0.0035	0.003	NA	0.00021[5]	0.003	µg/L	0.00000000051
Hexachlorobenzene	µg/kg	0.6	--	NA	0.6	µg/kg	0.2	--	NA	0.3	0.3	µg/L	0.000029
PBDEs	µg/kg	--	26	NA	26	µg/kg	NA	NA	NA	NA	NA	µg/L	NA
PCBs	µg/kg	0.5	0.25	NA	0.25	µg/kg	0.2	0.1	NA	6	6.0	µg/L	0.0000064
cPAHs (BaP Eq)	µg/kg	0.05	--	NA	0.05	µg/kg	3,950	--	NA	12	3,950	µg/L	0.0018

Notes:

NA - Not applicable
ND - Not determined or detected
1 - These values are from Oregon WQS for human health (organism only).
2 - This value is for the 4-4' isomer of either DDE or DDT; 0.000031 ug/L is the value for the 4-4' DDD isomer.
3 - The arsenic criteria are expressed as total inorganic arsenic. The "water + organism" criterion is based on a risk level of 1×10^{-4}
4 - Tissue values are for methyl mercury.
5 - Insufficient number of detections to calculate a background. Value represents 95th percentile of the ND values in the upstream data set with the Blue Heron West Linn data removed consistent with evaluation in the RI Section 7.
6 - The PRG is less than the achievable detection limit; thus, the PRG is evaluated at the established detection limit from the background data set.

BaP Eq - benzo(a)pyrene equivalent