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Table 3. Summary of 100-K Operable Unit Proposed Cleanup Levels in vadose zone based on Human Health, Groundwater Protection, Surface Water Protection, and Ecological PRGs

COC	Hanford Site Background Concentration ^a	Proposed Shallow Cleanup Levels (<=15 ft bgs)		Proposed Groundwater and Surface Water Protection Cleanup Levels	
		Proposed CUL	Driver	Proposed CUL	Driver
Radionuclides pCi/g					
Americium-241	--	32	DOE/RL-96-17 Residential RAG	9,990	100:0 Contaminant Source Model GWP
Carbon-14	--	8.7	DOE/RL-96-17 Residential RAG	80	100:0 Contaminant Source Model GWP
Cesium-137	1.1	4.4	Direct Human Health	143,128	100:0 Contaminant Source Model GWP
Cobalt-60	0.0084	1.4	DOE/RL-96-17 Residential RAG	198,457	100:0 Contaminant Source Model GWP
Europium-152	--	3.3	DOE/RL-96-17 Residential RAG	133,202	100:0 Contaminant Source Model GWP
Europium-154	0.033	3.0	DOE/RL-96-17 Residential RAG	39,961	100:0 Contaminant Source Model GWP
Europium-155	0.054	125	DOE/RL-96-17 Residential RAG	399,606	100:0 Contaminant Source Model GWP
Nickel-63	--	608	Direct Human Health	9,438	100:0 Contaminant Source Model GWP
Plutonium-238	0.0038	39	DOE/RL-96-17 Residential RAG	9,990	100:0 Contaminant Source Model GWP
Plutonium-239/240	0.025	35	DOE/RL-96-17 Residential RAG	9,990	100:0 Contaminant Source Model GWP
Total beta radiostrontium (Sr-90)	0.18	2.3	Direct Human Health	1,518	100:0 Contaminant Source Model GWP
Tritium	--	420	Ecological Mammal	1,127	100:0 Contaminant Source Model GWP
Uranium-233/234	1.1	1.1	DOE/RL-96-17 Residential RAG	38	100:0 Contaminant Source Model GWP
Uranium-235	0.11	0.61	DOE/RL-96-17 Residential RAG	38	100:0 Contaminant Source Model GWP
Chemicals (mg/kg)					
Antimony	0.13	32	Direct Human Health	22	100:0 Contaminant Source Model SWP
Arsenic	6.5	20 ^b	WAC 173-340-900, Table 740-1, Method A	20 ^b	WAC 173-340-900, Table 740-1, Method A

Proposed Plan for Remediation of the 100-KR-1, 100-KR-2, and 100-KR-4 Operable Units, DOE-RL-2010-82, Post Draft A - Errata

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COC	Hanford Site Background Concentration ^a	Proposed Shallow Cleanup Levels (<=15 ft bgs)		Proposed Groundwater and Surface Water Protection Cleanup Levels	
		Proposed CUL	Driver	Proposed CUL	Driver
Barium	132	358	Ecological Invertebrate	83,286	100:0 Contaminant Source Model SWP
Boron	3.9	30	Ecological Plant	8,999	100:0 Contaminant Source Model GWP
Cadmium	0.56	9.8	Ecological Plant	25	100:0 Contaminant Source Model SWP
Chromium	18.5	109	Ecological Avian	-- ^c	--
Copper	22	58	Ecological Invertebrate	660	100:0 Contaminant Source Model SWP
Cr(VI)	--	2.1	DOE/RL 96-17 Residential RAG	2.0 ^d	DOE/RL 96-17 SWP RAG
Lead	10.2	156	Ecological Avian	211	100:0 Contaminant Source Model SWP
Manganese	512	1,260	Ecological Plant	-- ^c	--
Mercury	0.013	0.30	Ecological Plant	1.2	100:0 Contaminant Source Model SWP
Nickel	19	38	Ecological Plant	-- ^c	--
Selenium	0.78	1.4	Ecological Mammal	34	100:0 Contaminant Source Model SWP
Vanadium	85	85	Hanford Site Background	-- ^c	--
Zinc	68	621	Ecological Plant	9,101	100:0 Contaminant Source Model SWP
Nitrate	52	128,000	DOE/RL 96-17 Residential RAG	1,808	100:0 Contaminant Source Model GWP
Nitrite	--	8,000	DOE/RL 96-17 Residential RAG	133	100:0 Contaminant Source Model GWP
Sulfate	237	--	--	10,045	100:0 Contaminant Source Model GWP
Aroclor 1016	--	0.5	DOE/RL 96-17 Residential RAG	-- ^c	--
Aroclor 1221	--	0.50	Direct Human Health	0.0014	100:0 Contaminant Source Model SWP

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COC	Hanford Site Background Concentration ^a	Proposed Shallow Cleanup Levels (<= 15 ft bgs)		Proposed Groundwater and Surface Water Protection Cleanup Levels	
		Proposed CUL	Driver	Proposed CUL	Driver
Aroclor 1232	--	0.50	Direct Human Health	0.0014	100:0 Contaminant Source Model SWP
Aroclor 1242	--	0.50	Direct Human Health	-- ^c	--
Aroclor 1248	--	0.32	Ecological Mammal	-- ^c	--
Aroclor 1254	--	0.50	Direct Human Health	-- ^c	--
Aroclor 1260	--	0.50	Direct Human Health	-- ^c	--
Ethylene glycol	--	160,000	Direct Human Health	-- ^c	--
Total petroleum hydrocarbons–diesel range	--	200	Ecological Invertebrate	-- ^c	--
Total petroleum hydrocarbons–motor oil (high boiling)	--	200	DOE/RL 96-17 Residential RAG	-- ^c	--

a. Hanford Site background values for nonradionuclides: DOE/RL-92-24, Vol. 1, Rev. 4, Hanford Site Background: Part 1, Soil Background for Nonradioactive Analytes, ECF-Hanford-11-0038, Soil Background Data for Interim Use at the Hanford Site (DOE/RL-2010-97); Hanford Site background values for radionuclides: DOE/RL-96-12, Rev. 0, Hanford Site Background: Part 2, Soil Background for Radionuclides.

b. Arsenic PRG is compared to the WAC 173-340-900, Table 740-1, Method A, soil cleanup level for unrestricted Land Use.

c. For calculated soil activities or PRGs protective of groundwater, STOMP 1-D predicts these analytes will not reach peak groundwater concentration within 10,000 years assuming that 100% of the vadose zone is contaminated.

d. Cr(VI) PRG is set to the interim action RAG of 2.0 mg/kg (DOE/RL-96-17).

e. A GWP or SWP PRG is not calculated because a groundwater cleanup level or MCL is not available for this analyte.

