

Table 5-23. Estimated annual average concentrations of radionuclides in air, milk, and water from routine operating (reference case) releases

Nuclide	Concentration							
	Co-60 and Cs-137		L-RX	L-SUPP	SRP	DWPF	Vogtle	Total
	1st yr	10th yr	10th yr	10th yr	10th yr <sup>b</sup>	10th yr	10th yr	10th yr
IN MILK FROM ATMOSPHERIC RELEASES (MAXIMUM AT PLANT BOUNDARY), pCi/liter								
H-3	--	--	$7.0 \times 10^2$	$5.3 \times 10^{-3}$	$3.2 \times 10^3$	$2.2 \times 10^{-1}$	--	$3.9 \times 10^3$
I-131	--	--	$1.8 \times 10^{-3}$	$1.2 \times 10^{-3}$	$1.1 \times 10^{-2}$	--	$3.6 \times 10^{-1}$	$3.7 \times 10^{-1}$
DA-48								
IN AIR FROM ATMOSPHERIC RELEASES (MAXIMUM AT PLANT BOUNDARY), pCi/m <sup>3</sup>								
H-3	--	--	$4.4 \times 10^{-3}$	$3.3$	$2.0 \times 10^2$	$1.4 \times 10^{-2}$	--	$2.4 \times 10^2$
C-14	--	--	$9.3 \times 10^{-3}$	$2.5 \times 10^{-3}$	$3.4 \times 10^{-2}$	--	--	$4.6 \times 10^{-2}$
Ar-41	--	--	$8.3$	--	$1.4 \times 10^1$	--	--	$2.3 \times 10^1$
DA-48								
IN RIVER WATER BELOW PLANT, pCi/liter								
H-3	--	--	$1.0 \times 10^3$	$4.1 \times 10^2$	$3.0 \times 10^3$	$9.2 \times 10^1$	$1.5 \times 10^2$	$4.7 \times 10^3$
Co-60	$2.7 \times 10^{-2}$	$8.6 \times 10^{-4}$	$4.9 \times 10^{-3}$	$3.6 \times 10^{-3}$	$2.3 \times 10^{-2}$	$9.4 \times 10^{-12}$	--	$3.2 \times 10^{-2}$
Sr-90	--	--	$1.2 \times 10^{-2}$	$6.7 \times 10^{-3}$	$4.8 \times 10^{-2}$	$2.5 \times 10^{-6}$	$1.7 \times 10^{-5}$	$6.7 \times 10^{-2}$
Cs-137	$4.8 \times 10^{-1}$	$4.2 \times 10^{-2}$	$4.4 \times 10^{-5}$	$2.1 \times 10^{-3}$	$2.4 \times 10^{-2}$	$5.5 \times 10^{-10}$	$1.6 \times 10^{-1}$	$2.3 \times 10^{-1}$
5-52								
IN PORT WENTWORTH DRINKING WATER, pCi/liter								
H-3	--	--	$1.0 \times 10^3$	$4.1 \times 10^2$	$3.0 \times 10^3$	$9.2 \times 10$	$1.5 \times 10^2$	$4.7 \times 10^3$
Co-60 <sup>a</sup>	$2.7 \times 10^{-2}$	$8.6 \times 10^{-4}$	$4.9 \times 10^{-3}$	$3.6 \times 10^{-3}$	$2.3 \times 10^{-2}$	$9.4 \times 10^{-12}$	--	$3.2 \times 10^{-2}$
Sr-90	--	--	$1.2 \times 10^{-2}$	$6.7 \times 10^{-3}$	$4.8 \times 10^{-2}$	$2.5 \times 10^{-6}$	$1.7 \times 10^{-5}$	$6.7 \times 10^{-2}$
Cs-137	$9.2 \times 10^{-2}$	$8.3 \times 10^{-3}$	$8.7 \times 10^{-6}$	$4.1 \times 10^{-4}$	$4.7 \times 10^{-3}$	$1.1 \times 10^{-10}$	$3.2 \times 10^{-2}$	$4.5 \times 10^{-2}$
DA-48								
IN BEAUFORT-JASPER DRINKING WATER, pCi/liter								
H-3	--	--	$1.0 \times 10^3$	$4.1 \times 10^2$	$3.0 \times 10^3$	$9.2 \times 10^1$	$1.5 \times 10^2$	$4.7 \times 10^3$
Co-60 <sup>a</sup>	$2.7 \times 10^{-2}$	$8.6 \times 10^{-4}$	$4.9 \times 10^{-3}$	$3.6 \times 10^{-3}$	$2.3 \times 10^{-2}$	$9.4 \times 10^{-12}$	--	$3.2 \times 10^{-2}$
Sr-90	--	--	$1.2 \times 10^{-2}$	$6.7 \times 10^{-3}$	$4.8 \times 10^{-2}$	$2.5 \times 10^{-6}$	$1.7 \times 10^{-5}$	$6.7 \times 10^{-2}$
Cs-137	$1.2 \times 10^{-2}$	$1.0 \times 10^{-3}$	$1.1 \times 10^{-6}$	$5.1 \times 10^{-5}$	$5.9 \times 10^{-4}$	$1.3 \times 10^{-11}$	$3.9 \times 10^{-3}$	$5.5 \times 10^{-3}$

<sup>a</sup>Cs-137 concentrations in Port Wentworth and Beaufort-Jasper water were calculated by applying factors recommended by D. W. Hayes and A. L. Boni (memorandum from D. W. Hayes and A. L. Boni to J. C. Corey, "Cs-137 in the Savannah River and the Beaufort-Jasper and Port Wentworth Water Treatment Plants," January 10, 1983). These factors were not applied to other radionuclides.

<sup>b</sup>Represents current operation.