

Table 4-21. Radiological doses associated with the Shut Down and Deactivate Alternative and resulting health effects to the public.^a

Receptor(s) ^b	No-Action Alternative			Probability ^d or number of fatal cancers	Shut Down and Deactivate Alternative			Probability ^d or number of fatal cancers
	Dose ^c				Dose ^c			
	Atmospheric releases	Aqueous releases	Total		Atmospheric releases	Aqueous releases	Total	
Offsite maximally exposed individual								
Annual (millirem)	1.5×10^{-4}	NCE	1.5×10^{-4}	7.5×10^{-11}	4.0×10^{-4}	1.4×10^{-5}	4.2×10^{-4}	2.1×10^{-10}
Lifetime ^f (millirem)	2.6×10^{-3}	NC	2.6×10^{-3}	1.3×10^{-9}	1.9×10^{-2}	6.7×10^{-4}	1.9×10^{-2}	9.7×10^{-9}
Population								
Annual (person-rem)	1.4×10^{-3}	NC	1.4×10^{-3}	6.8×10^{-7}	4.2×10^{-4}	3.5×10^{-5}	4.6×10^{-4}	2.3×10^{-7}
Lifetime ^f (person-rem)	2.4×10^{-2}	NC	2.4×10^{-2}	1.2×10^{-5}	1.9×10^{-2}	2.3×10^{-3}	2.1×10^{-2}	1.0×10^{-5}

a. See Tables C-9, C-10, C-11, and C-12 in Appendix C.

b. The doses to the public from total SRS operations in 1995 were 0.20 millirem to the offsite maximally exposed individual (0.06 millirem from airborne releases and 0.14 millirem from aqueous releases) and 5.1 person-rem to the regional population (3.5 person-rem from airborne releases and 1.6 person-rem from aqueous releases). Source: Arnett, Mamatey, and Spitzer (1996).

c. For atmospheric releases, the dose is to the population within 50 miles (80 kilometers) of SRS. For aqueous releases, the dose is to the people using the Savannah River from SRS to the Atlantic Ocean.

d. For the offsite maximally exposed individual, probability of a latent fatal cancer; for the population, number of fatal cancers.

e. NC = not calculated for no action.

f. Based on 70 years of exposure. Doses are corrected for decay.