

Table 4-61. Expected average annual liquid radioactive releases from L-Reactor operation  
(curies per year)

Radionuclide	1st year of operation				10th year of operation			
	To 1000-acre lake	To seepage basin	To 1000-acre lake from ground water <sup>a</sup>	Total to 1000-acre lake	To 1000-acre lake	To seepage basin	To 1000-acre lake from ground water <sup>b</sup>	Total to 1000-acre lake
H-3	$3.6 \times 10^2$	$c1.1 \times 10^3$	--	$3.6 \times 10^2$	$3.6 \times 10^3$	$c1.1 \times 10^4$	$6.0 \times 10^3$	$9.6 \times 10^3$
P-32	--	$1.2 \times 10^{-3}$	--	--	--	$1.2 \times 10^{-3}$	--	--
S-35	--	$9.5 \times 10^{-3}$	--	--	--	$9.5 \times 10^{-3}$	$2.9 \times 10^{-8}$	$2.9 \times 10^{-8}$
Cr-51	--	$1.8 \times 10^{-1}$	--	--	--	$1.8 \times 10^{-1}$	--	--
Co-58,60	$4.5 \times 10^{-2}$	$3.7 \times 10^{-4}$	--	$4.5 \times 10^{-2}$	$4.5 \times 10^{-2}$	$3.7 \times 10^{-4}$	$2.1 \times 10^{-4}$	$4.5 \times 10^{-2}$
Sr-89	--	$7.0 \times 10^{-5}$	--	--	--	$7.0 \times 10^{-5}$	--	--
Sr-90	$1.6 \times 10^{-4}$	$2.0 \times 10^{-4}$	--	$1.6 \times 10^{-4}$	$1.6 \times 10^{-4}$	$2.0 \times 10^{-4}$	--	$1.6 \times 10^{-4}$
Y-91	--	$5.1 \times 10^{-3}$	--	--	--	$5.1 \times 10^{-3}$	--	--
Zr-95	--	$1.1 \times 10^{-2}$	--	--	--	$1.1 \times 10^{-2}$	--	--
Ru-106	--	$3.4 \times 10^{-4}$	--	--	--	$3.4 \times 10^{-4}$	$1.7 \times 10^{-5}$	$1.7 \times 10^{-5}$
Sb-125	--	$8.0 \times 10^{-3}$	--	--	--	$8.0 \times 10^{-3}$	$2.6 \times 10^{-3}$	$2.6 \times 10^{-3}$
I-131	--	$6.9 \times 10^{-3}$	--	--	--	$6.9 \times 10^{-3}$	--	--
Cs-134	--	$5.1 \times 10^{-3}$	--	--	--	$5.1 \times 10^{-3}$	--	--
Cs-137	$4.1 \times 10^{-4}$	$4.4 \times 10^{-2}$	--	$4.1 \times 10^{-4}$	$4.1 \times 10^{-4}$	$4.4 \times 10^{-2}$	--	$4.1 \times 10^{-4}$
Ce-144	--	$1.9 \times 10^{-2}$	--	--	--	$1.9 \times 10^{-2}$	$3.8 \times 10^{-4}$	$3.8 \times 10^{-4}$
Pm-147	--	$2.8 \times 10^{-3}$	--	--	--	$2.8 \times 10^{-3}$	$8.8 \times 10^{-4}$	$8.8 \times 10^{-4}$
Unidentified beta-gamma <sup>d</sup>	$1.1 \times 10^{-1}$	$8.9 \times 10^{-2}$	--	$1.1 \times 10^{-1}$	$1.1 \times 10^{-1}$	$8.9 \times 10^{-2}$	--	$1.1 \times 10^{-1}$
Unidentified alpha <sup>e</sup>	$2.0 \times 10^{-5}$	$3.2 \times 10^{-4}$	--	$2.0 \times 10^{-5}$	$2.0 \times 10^{-5}$	$3.2 \times 10^{-4}$	--	$2.0 \times 10^{-5}$

<sup>a</sup>Outcrop activities will not occur during the first 4 years of reactor operation; see Table B-19 and Section F.2.10.

<sup>b</sup>Outcrop activities after 15 years of L-Reactor operation. Due to long transport times in ground water, strontium-90, cesium-134, cesium-137, and plutonium-239 do not reach outcrop in the 15-year period.

<sup>c</sup>Thirty percent of this tritium is expected to evaporate.

<sup>d</sup>Assumed to be strontium-90.

<sup>e</sup>Assumed to be plutonium-239.