

### 10 Radiiodine Data

Radio-nuclide	Annual Limit of Intake (ALI) (Occupational Values <sup>a</sup> )								Derived Air Concentration (DAC)	
	Oral Ingestion				Inhalation					
	Whole Body		Thyroid		Whole Body		Thyroid		$\mu\text{Ci/mL}$	$\text{Bq/m}^3$
	$\mu\text{Ci}$	Bq	$\mu\text{Ci}$	Bq	$\mu\text{Ci}$	Bq	$\mu\text{Ci}$	Bq		
I-131	30	1E6	90	3E6	50	2E6	200	7E6	$2 \times 10^{-8}$	7E2
I-133	100	4E6	100	2E7	300	1E7	900	3E7	$1 \times 10^{-7}$	4E3

<sup>a</sup>10 CFR20, Appendix B.

Property	I-131	I-133
Physical half lives <sup>a</sup> (days)	8.04	0.87
Effective half lives (days)	7.4	0.7
Time after exposure to reach maximum thyroid concentration:		
Ingestion (days)	1	-
Inhalation (days)	2	0.7
50-year integrated thyroid dose from intake 1 ALI (rem)	50	50
Committed effective dose equivalent from 1 DAC-hour exposure to radiiodines (mrem)	2.5	2.5

<sup>a</sup>E.T. Lessard et al., Interpretation of Bioassay Measurements, NUREG/CR-4884, 1987, Superintendent of Documents, U.S. Government Printing Office, P.O. Box 3782, Washington, DC 20013-7982.