

Dose Calculations for Aquatic Biota in the Hudson River

Water Concentration in Hudson River

	pCi/L*	Bq/L
H-3	10	0.37
Sr-90	20	0.74

* Provided by M. Barvenik

Bioconcentration Factor

	L/kg
H-3	1
Sr-90	320

Concentration in aquatic biota

	Bq/kg
H-3	0.37
Sr-90	237.04

Dose Coefficients (from UNSCEAR 2008 Report)

	External Exposure uGy/h per Bq/kg	Internal Exposure uGy/h per Bq/kg
H-3	8.2E-11	3.3E-06
Sr-90	2.0E-04	6.3E-04

Dose rate - aquatic biota

	External Exposure uGy/h	Internal Exposure uGy/h
H-3	3.0E-11	1.2E-06
Sr-90	4.7E-02	1.5E-01

	External Exposure rad/d	Internal Exposure rad/d	Total Dose Rate (UNSCEAR 2008) rad/d	Total Dose Rate (RESRAD-BIOTA) rad/d
H-3	7.3E-14	2.9E-09	2.9E-09	2.1E-09
Sr-90	1.1E-04	3.6E-04	4.7E-04	3.7E-04