


United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of:	Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3)
	ASLBP #: 07-858-03-LR-BD01
	Docket #: 05000247   05000286
	Exhibit #: ENT000323-00-BD01
	Admitted: 10/15/2012
	Rejected:
Other:	Identified: 10/15/2012
	Withdrawn:
	Stricken:

ENT000323  
Submitted: March 29, 2012

## 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