

8/27/80

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To: B. W. Wachholz  
J. W. Healy

From: W. J. Bair

Meeting with George Casarett on August 22, 1980

409886

Re: Suggestions for Bikini book risk values

I. Cancer Risks

Relative risk: gives higher values, less reliable because spontaneous cancer incidence is not known.

Absolute: is less variable with population--not dependent upon spontaneous cancer incidence

George thinks both should be used to show range of risk estimates. To do so means percentage values as used in Enewetak book should not be used.

Dose

George suggests using bone marrow dose only because it is highest.

BEIR-I

EPA revised risk coefficients to accommodate changes in U.S. population statistics.

II. Birth Defects

Question of meaning of parental exposure--total dose to both parents? May need to double dose used for Bikini people.

George thinks approach used for 3 Mile Island report is valid.

(NOTE: Asterisks \*, \*\*, and \*\*\* noted on the attached tables are for references that will be supplied later.)

REPOSITORY PNNL  
 COLLECTION Marshall Islands  
 BOX No. 5684  
 FOLDER Untitled

DOCUMENT DOES NOT CONTAIN ECI

Reviewed by X. Schmitt Date 4/30/97

Living Condition

(Risk Coefficients - p

Eneu - 100%

1. Imported food
2. No imported food

Bikini - 100%

3. Imported food
4. No imported food

Eneu - 330, Bikini 35

5. Imported food
6. No imported food

Eneu (1 on and 1 off)

7. Imported food
8. No imported food

Eneu - 330, Bikini - 3

9. Imported food
10. No imported food

Eneu

11. Imported food
12. No imported food

Eneu - 330, Bikini - 3

13. Imported food
14. No imported food

## BEIR I

Relative  
(Based on 0.4% Increase Per Rem)

	<u>% Increase</u>	<u>Normal Cancer Death (15%)</u>	<u>Number of Increased Cancer Death</u>
1.	1.2	83	.996
2.	2.4	83	1.99
3.	10.	83	8.3
4.	18.8	83	15.6
5.	1.36	83	1.13
6.	2.6	83	2.15
7.	.6	53	.318
8.	1.24	53	.66
9.	.68	53	.36
10.	1.32	53	.6996
11.	.412	35	.144
12.	.84	35	.294
13.	.48	35	.168
14.	.88	35	.308

BIRTH DEFECTS

	Population and Number of Births	Spontaneous Birth Defects (10.7%-11%)*	30-Year Dose (rem)	% Increase (0.2%/rem)**	No. of Increased Birth Defects	Number Based on 0.01%/rem
1.	550	59 → 60	2.8	.56	.336	.017
2.	550	59 → 60	5.4	1.08	.648	.032
3.	550	59 60	24.	4.8	2.88	.144
4.	550	59 60	44.	8.8	5.28	.264
5.	550	59 60	3.2	.64	.38	.019
6.	550	59 60	5.9	1.18	.708	.0354
7.	350	37 40	1.4	.28	.112	.0056
8.	350	37 40	2.8	.56	.224	.0112
9.	350	37 40	1.6	.32	.128	.0064
10.	350	37 40	3.0	.6	.24	.012
11.	235	25 27	.96	.192	.0518	.0026
12.	235	25 27	1.9	.38	.1026	.00513
13.	235	25 27	1.1	.22	.0594	.0029
14.	235	25 27	2.0	.4	.108	.0054