

PR 19,20 and 50
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October 13, 2006

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Secretary, U.S. Nuclear Regulatory Commission
attn. Rulemaking and Adjudications Staff
Washington, DC 20555 - 0001

Subject: RIN 3150 - AH40

Dear Sirs,

When Congress enacted the Energy Reorganization Act of 1974, it did so under the influence of a fearsome, feudal, Shinto religious belief. It adopted that belief as the basis of its unsupported charge that nuclear radiations were an intolerable threat to the health of the public. This unsupported belief was and continues to be promoted by the National Academies of Science. This belief prevails in spite of the fact that radiations from 400 operating nuclear, water-moderated power plants have caused no serious injuries in over 40 years. Perhaps, the first amendment was wise to advise against the promotion of religious beliefs.

The NRC has accepted this religious belief from the NAS in the form of the LNT (no recovery) theory of radiation damage. The NRC used this belief to estimate the hazard of nuclear radiation. According to the belief, irradiation damage is permanent like an apple, so it incorrectly divided the deadly dose of 500 Rem of heat into 100 packages and allowed nuclear workers one package of 5 Rem per year. Presumably, a worker receiving 5 Rem per year for 30 years could retire and not feel 30% dead. Operating on the same basis, the NRC is now working to reduce the annual industrial dose to 0.1 Rem. Adding that to a background of 0.3 Rem. nuclear workers should be only 2.4% dead after 30 years.

The physicians at the NAS need to look at more than one datum point when they do science. The lawyers at the NRC need to remember the mathematical rules for calculating a heat rate from heat. 500 Rem of heat was deadly in Japan in 1945. It was applied by atomic explosions lasting less than 0.003 second. The power expended to cause death was much more than 170,000 Rem per second. That is more than twelve orders of magnitude greater than 5 Rem per year. Thousands of Japanese recovered and lived normal lives after receiving doses of the order of 300 Rem.

In accord with the law of life, 28 workers at Chernobyl in 1986 died from doses near and above 500 Rem. 209 workers were hospitalized with doses between about 200 and 500 Rem. They were discharged at times indicating biological recovery rates of about 100 Rem per week. That recovery rate is 1000 times 5 Rem per year, 50,000 times 0.1 Rem per year, and explains why workers receiving about 100 Rem in less than a week didn't feel sick. The NRC needs to explain why they didn't feel 20% dead.

Learning makes for a long life,

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SECY-02

Mortality Data for Exposures to Nuclear Radiation *

<u>Exposure Rem**</u>	<u>Length of Exposure</u>	<u>Year of Exposure</u>	<u>Number of Persons Exposed</u>	<u>Condition of Persons Exposed a few Months Later</u>
0.25	yearly	this	6 billion	alive
5 or less	yearly	this	Tens of thousands	alive
10 or less	0.003 sec.	1945	35,000	alive
approx. 100	0.003 sec.	1945	7,100	alive
200 or less	4 days	1986	140	alive***
approx. 300	0.003 sec.	1945	3000	alive
200 to 400	4 days	1986	54 1	alive*** dead
approx. 500	0.003 sec.	1945	About 20	dead
400 to 600	4 days	1986	14 7	alive*** dead
600 or more	4 days	1986	1 20	alive*** dead
1500 or less	10 years	1986 - 1996	1 or more	alive

* References 1 and 2

** Divide Rem by 100 to get Sv; 500 Rem equals 1.2 calories

*** Recovered from radiation sickness

References

1. J.R. Totter, Nuclear Safety, Vol. 21, No. 1, Jan.-Feb. 1980, pp. 83-94.
2. Summary report, Nuclear News, Vol. 39, April 1996, page 35.