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RECEIVED

January 5, 2016

Ms. Cindy Bladey, Office of Administration
Mail Stop: OWFN-12H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

12/24/2015
80FR 80395

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Re: Docket ID NRC-2015-0286, Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as is Reasonably Achievable. Fed. Reg. 80(247):80395-80396, Dec. 24, 2015.

Dear Ms. Bladey:

I wish to comment on the above-cited draft regulatory guide. I do not find the philosophy of the NRC staff acceptable. I do not find the concept of ALARA acceptable at levels below 5 rem/y.

The ALARA concept is based upon the flawed linear no-threshold (LNT) hypothesis. The LNT hypothesis is based upon the idea that one radiation can interact with a cell's DNA and cause a cancer, and that there is no such thing as radiation repair. There is a huge quantity of excellent quality scientific evidence that neither assumption is correct.

In addition to the arguments and literature cited in my petition of 02-09-15, I would like to add the following references. For cancer genetics, please see recent references (1) and (2). A quote from (2) reads, "Genome-sequencing data exclude the possibility of spontaneous tumors: a normal adult cell cannot suddenly transform into a cancer cell." **As spontaneous transformation from a single radiation is exactly what the LNT hypothesis assumes is true, the LNT hypothesis is incorrect.**

As far as radiation repair is concerned, I stated in my petition that over 150 genes have been discovered that repair damage from noxious agents, including ionizing radiation. On Oct. 8, 2015, p. A18, the Los Angeles Times announced that three scientists had won the Nobel Prize in Chemistry for demonstrating biochemical systems that repair DNA damage. **The LNT hypothesis assumes no repair; therefore the LNT hypothesis is incorrect.**

SUNSI Review Complete

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E-RIDS= ADM-03

Add= C. Jun (EXSIA)

H. Karagiannis (HXK)

As ALARA is based upon the validity of the LNT hypothesis, and the LNT hypothesis is invalid, ALARA is also invalid. Staff should be removed from the perpetuation of ALARA misinformation.

Thank you for your attention and consideration.

Sincerely,



Carol S. Marcus, Ph.D., M.D.
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Medicine), and of Radiological Sciences
David Geffen School of Medicine, UCLA

(1) Martincorena I, and Campbell PJ: Somatic mutation in cancer and normal cells.
Science 439:1483-1489, 25 Sept. 2015, issue 6255.

(2) Vogelstein B, and Kinzler KW: The path to cancer---three strikes and you're out. N
Eng J Med 373(20):1895-1898 Nov. 12, 2015.