

Newell, Brian

From: Carol Marcus <csmarcus@ucla.edu>
Sent: Thursday, March 19, 2015 2:20 PM
To: CHAIRMAN Resource; CMRBARAN Resource; Cmr. Kristine L. Sviniki; CMROSTENDORFF Resource
Subject: Comment Pertaining to Part 20 ANPRM
Attachments: NRC-Part 20 ANPR Comments 03-19-15.docx

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March 19, 2015

Dear Commissioners:

Attached please find my comment letter pertaining to NRC's request for comments concerning the adoption of ICRP radiation limits for workers.

Thank you for your attention and consideration.

Sincerely, Carol Marcus



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March 19, 2015

Secretary, U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
ATTN: Rulemaking and Adjudications Staff

Re: Docket ID NRC-2009-0279

Dear Sir/Madam:

I wish to oppose NRC's stated plan to align its radiation protection requirements more closely with that of the ICRP. The NRC has it backwards. It should be moving further away from the ICRP.

At present there are at least three petitions submitted to the NRC to drop the Linear No-Threshold (LNT) assumption as the basis of radiation protection and accept thresholds and radiation hormesis instead and drop ALARA. The LNT is based upon flawed claims, unrealistic models, and bad science. On the other hand, there is a huge body of valid scientific literature supporting thresholds and radiation hormesis. The ICRP assumes the correctness of the LNT. They are wrong.

The NRC plan to make its radiation protection program closer to that of ICRP has no scientific basis. It is instead based upon the idea that uniformity is a good thing. Uniformity makes no sense if it makes everyone uniformly wrong. It is better to have an outlier that is correct. At least it sets a good example for the others.

The NRC appears to believe that decreasing worker dose limits to 2 rem/year plus ALARA is attainable. While this may be true for the great majority of materials licensees, it is not true for some groups of workers exposed to radiation who are not regulated by the NRC because their radiation exposures come from natural background or machines. Airlines pilots who fly polar routes may receive exposures approaching the present 5 rem limit, even though this is not a radiation regulated activity. Suggesting that this is dangerous is untrue, because there are no valid data showing that this is the case. According to the radiation regulators of Colorado, the yearly background radiation dose in Copper City, CO is 890 mrem. As this is nearly half the ICRP limit, with ALARA, the residents of Copper City have basically maxed out and should not, by your logic, be allowed to be radiation workers at all. Are you prepared to forbid them radiation work? A review of radiation absorbed doses by radiation workers in several large medical

centers showed that interventional radiologists and interventional cardiologists have the largest doses, often between 1 and 5 rem per year. They go to work and save peoples' lives daily. Do you expect the States, which regulate radiation-producing machines, to tell these highly trained and skilled essential specialists that they can only work for half or three quarters of a year? This is nonsensical, and will simply result in many of these interventionalists leaving their film badges in their desks when they walk into their cath labs, a situation which is illegal but made necessary by dysfunctional regulators and their scientifically unfounded radiation limits. Imagine a small city with only one interventional radiologist or cardiologist. A patient who needs an emergency procedure to plug a brain aneurysm or recanalize a coronary artery is supposed to be left to die if his emergency comes in the latter part of the year and the interventionalists are not allowed to work anymore that year? Or, do we invoke 10 CFR Part 20.1001 which says, "However, nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety." and exempt medical licensees from Part 20 altogether?

I sincerely recommend that NRC drops this whole project, as it is a clear and present danger to public health and safety and makes no scientific sense whatsoever.

Thank you for your attention and consideration.

Sincerely,



Carol S. Marcus, Ph.D., M.D.
Prof. of Radiation Oncology, of Molecular and Medical Pharmacology (Nuclear
Medicine), and of Radiological Sciences, David Geffen School of Medicine at UCLA