



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

August 11, 2021

Dr. Carol S. Marcus  
1877 Comstock Avenue  
Los Angeles, CA 90025-5014

Dear Dr. Marcus:

I am responding to the petition for rulemaking (PRM) that you submitted to the U.S. Nuclear Regulatory Commission (NRC), PRM-20-28, dated February 9, 2015 (Accession No. ML15051A503 in the NRC's Agencywide Documents Access and Management System). The NRC received two additional petitions on the same topic (PRM-20-29 and PRM-20-30); all three petitions were docketed using the same Docket ID (NRC-2015-0057). In these petitions, you and the other two petitioners request that the NRC amend Part 20 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Standards for Protection Against Radiation," based on what you characterize as new science and evidence that contradicts the linear no-threshold dose-effect model that serves as the basis for the NRC's radiation protection regulations. The specific recommendations made by you and the other petitioners are:

- Maintain worker doses at present levels, with allowance of up to 100 mSv (10 rem) effective dose per year if the doses are chronic;
- Remove the As Low As Is Reasonably Achievable principle entirely from the regulations, because you claim that it makes no sense to decrease radiation doses that are not only harmless but may be hormetic;
- Raise the public dose limits to be the same as the worker doses, because you claim that these low doses may be hormetic; and
- End differential doses to pregnant women, embryos and fetuses, and children under 18 years of age.

The notice of receipt and request for comment on your petition was published in the *Federal Register* on June 23, 2015 (80 FR 35870). The public comment period was initially set to close on September 9, 2015, but was subsequently extended to November 19, 2015 (80 FR 50804). The NRC received over 3,200 public comment letters.

The NRC has considered the petitions, and the arguments raised therein, as well as the comments received in response to the petitions. For the reasons stated in the enclosed *Federal Register* notice (FRN), the NRC is denying the three PRMs (PRM-20-28, PRM-20-29, and PRM-20-30) in their entirety. Given the current state of scientific knowledge, the NRC has determined that its current radiation protection regulations are effective and provide for the adequate protection of human health and safety such that changes to 10 CFR Part 20 are not warranted at this time.

C. Marcus

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The FRN denying the petitions is being transmitted to the Office of the *Federal Register* for publication.

Sincerely,

Annette Vietti-Cook  
Secretary of the Commission

Enclosure:  
*Federal Register* notice