

Jessie H. Roberson, Vice Chairman
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**DEFENSE NUCLEAR FACILITIES
SAFETY BOARD**

Washington, DC 20004-2901



August 10, 2015

The Honorable Elizabeth Sherwood-Randall
Deputy Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1000

Dear Deputy Secretary Sherwood-Randall:

The Department of Energy (DOE) recently issued a revision of Radcalc (version 4.1.1) and authorized its use at the discretion of users. This action is contrary to DOE's response (letter of M. Whitney, dated June 9, 2015) to our letter dated March 16, 2015, and to DOE's Radcalc Safety Advisory dated July 6, 2015. DOE issued Radcalc 4.1.1 without following essential federal oversight requirements. DOE had previously committed to mitigating the risks of the undocumented pedigree of the prior version of Radcalc (version 4.1) by establishing the quality pedigree in the next revision of Radcalc.

The quality assurance concerns we identified call into question whether the Radcalc safety calculation results are accurate and will perform their safety function. In the event of an accident, an error in Radcalc's calculation of decay heat, radioactivity, and/or hydrogen gas generation could lead to the selection of packaging that would not protect workers and the public from serious consequences in the event of an accident.

Therefore, pursuant to 42 U.S.C. § 2286b(d), we request a briefing within 10 days of the issuance of this letter explaining DOE's rationale for use of this new version of Radcalc at defense nuclear facilities and what compensatory measures are in place to offset deviating from the essential oversight requirements of DOE Order 414.1D, *Quality Assurance*, and DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*.

Sincerely,


Jessie H. Roberson
Vice Chairman

c: Mr. Joe Olencz