



## Arkansas Department of Health

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Governor Asa Hutchinson  
Nathaniel Smith, MD, MPH, Director and State Health Officer

March 16, 2015

Cardelia Maupin  
Office of Federal and State Materials  
and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Ms. Maupin:

The Arkansas Department of Health (Department), Radioactive Materials Program, has reviewed the Advanced Notice of Proposed Rulemaking (NRC-2009-0279) relating to greater alignment between the U.S. Nuclear Regulatory Commission regulations and the International Commission on Radiological Protection Publication 103, published in the *Federal Register*, Vol. 79, No. 143, July 25, 2014.

The Department has reviewed the issues and provides the following comments:

- 1) The Department favors adoption of the new International Commission on Radiological Protection (ICRP) 103 definitions, weighting factors and metabolic models, as referenced in 10 CFR 20.1003, 10 CFR 20.1004, Appendix B, et cetera. Total effective dose (TED) should be adopted in order to be consistent with the Department of Energy's (DOE) use of TED in its 10 CFR Part 835 (§ 835.2) as amended (72 FR 31904, June 8, 2007). The exact definition used by DOE should also be adopted: "Total effective dose (TED) means the sum of the effective dose (for external exposures) and the committed effective dose." However, since the ICRP will be providing updated dose coefficients (DC) over the next several years, movement in advance of a comprehensive body of data would seem premature. Implementation should be delayed until the new comprehensive set of DC values is published by the ICRP.
- 2) The Department favors adoption of a lens dose limit (10 CFR 20.1201(a)(2)(i)) of 5 rem/year, but **NOT** 2 rem/year calculated over 5 years. The latter is seen as overly burdensome to both users (mostly state x-ray registrants will be impacted) and the regulators, without a clear demonstration of benefit.
- 3) The Department does **NOT** favor adoption of the 100 mrem embryo/fetus limit for declared workers; the limit should remain at 500 mrem, as referenced in 10 CFR 20.1208. The rate of exposure resulting in 100 mrem over nine months approaches some background rates, and the limits of some dosimetry systems. The Department favors striking a balance between the protection of the fetus and the mother's right to work.

- 4) The Department does **NOT** favor regulation of administrative limits by the NRC; this should remain part of the licensee's responsibility in the management of their radiation safety program, as referenced in 10 CFR 20.1101. This is considered to be over-regulation. Specific ALARA planning and implementation should remain in the licensing guidance and in the licensee's development of their radiation safety program. This retains flexibility and applicability. The Department agrees that 20.2104 should be revised in order to address concurrent exposure. The way it is presently worded is not clear for licensees or for regulators.
- 5) The Department grudgingly favors further progress towards metrification, as referenced in 10 CFR 20.2101. Mixing of systems by licensees should be avoided – SI or traditional values should be used consistently by licensees. Both sets should be maintained, as both are still actively used, but SI should be the regulatory standard.
- 6) The Department does **NOT** favor adding more reporting categories at this time, as referenced in 10 CFR 20.2206. The current reporting categories and quantity limits in 10 CFR 20.2206(a)(7) should be sufficient to capture the majority of data of significant dose. We support 20.2206 to remain Compatibility D.

The Department appreciates this opportunity to comment on these issues. If there are any questions please contact Jared Thompson at (501) 661-2301.

Sincerely,

A handwritten signature in black ink, appearing to read "Bernard Bevill". The signature is fluid and cursive, with the first name "Bernard" and last name "Bevill" clearly distinguishable.

Bernard Bevill, Section Chief  
Radiation Control Section  
Arkansas Department of Health

cc: Mike Welling, Chair  
Organization of Agreement States

DS/ds