

BACKGROUND INFORMATION
ON THE ORIGIN OF THE NUMERIC VALUES
IN 10 CFR PART 30 APPENDIX B
FOR DECOMMISSIONING FINANCIAL ASSURANCE

Appendix B's possession values were not originally developed for determining any decommissioning financial assurance requirement. They were taken from 10 CFR Part 20 Appendix C possession thresholds established in 1958 for labeling.¹ The final decommissioning rule referenced Appendix C values when it established § 30.35 and § 70.25 in 1988.² The default values for unlisted isotopes were set to equal the lowest values of the listed isotopes: 0.01 µCi for alpha-emitters like radium-226, and 0.1 µCi for the most restricted non-alpha-bearing isotope, iodine-129.

The NRC extensively revised Appendix C as part of a major revision of Part 20 in 1991 to incorporate new dose limits recommended in the 1977 International Commission on Radiation Protection (ICRP) Publication 26 and subsequent ICRP publications.³ These revised dose limits are more risk-informed than the limits on which the original Appendix C was based because the newer ones benefit from more recent research into the biological effects of ionizing radiation.

When Appendix B to Part 30 was first promulgated in 1993, however, rather than incorporating the new Appendix C's listings and values, the NRC continued to use the values from the older Appendix C referenced in the Decommissioning Rule.⁴ Consequently, Appendix B to Part 30 lacks the additional listings, including those for accelerator-produced isotopes, from the updated Appendix C to 10 CFR Part 20.

¹ Appendix C values were subsequently aligned with 10 CFR 30.71 exemption values in 1970 to ensure that a label and a license would be required to possess an isotope in any quantity greater than the limit for exemption from regulation (35 FR 6425, "Part 20 – Standards for Protection against Radiation: Appendix C: Final Rule," April 22, 1970).

² 53 FR 24044, "General Requirements for Decommissioning Nuclear Facilities," June 27, 1988.

³ 56 FR 23360, "Standards for Protection Against Radiation: Final Rule," May 21, 1991.

⁴ 58 FR 67659, "Standards for Protection against Radiation; Removal of Expired Material: Final Rule," December 22, 1993. This page notes that the affected parts of § 30.35 are "amended by revising the ... references to 'appendix C to §§ 20.1-20.601 of 10 CFR part 20' to read as 'appendix B to part 30.'" Sections 20.1-20.601 were the older provisions of part 20 that were superseded elsewhere by §§ 1001.1-2401.1 of the updated part 20 promulgated in 1991 (56 FR 23360, May 21, 1991).