

January 9, 2014

MEMORANDUM TO: Michael J. Case, Director
Division of Engineering
Office of Nuclear Regulatory Research

FROM: David L. Rudland, Chief **/RA/ D. Rudland**
Component Integrity Branch
Division of Engineering
Office of Nuclear Regulatory Research

SUBJECT: RESULTS OF PERIODIC REVIEW OF REGULATORY GUIDE
(RG) 1.99

This memorandum documents the US Nuclear Regulatory Commission (NRC) periodic review of regulatory guide (RG) 1.99, "Radiation Embrittlement of Reactor Vessel Materials." The RG describes general procedures acceptable to the NRC staff for calculating the effects of neutron radiation embrittlement of the low-alloy steels currently used for light-water-cooled reactor vessels published in May 1988. As discussed in Management Directive 6.6, "Regulatory Guides," the NRC staff reviews RGs approximately every 5 years to ensure that the RGs continue to provide useful guidance. Documentation of the NRC staff review is enclosed.

The staff did not identify any technical or regulatory issues in the review. Therefore, RG 1.99 Revision 2 is deemed to be acceptable for continued use. The NRC plans to complete a detailed evaluation of embrittlement prediction methodologies, data, and understandings to assess their impact on RG 1.99. The NRC will publish a report on this evaluation, including a determination of the future need to revise RG 1.99, in approximately two years' time.

Enclosure:
As stated

CONTACT: Mark Kirk, RES/DE/CIB
301-251-7631

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