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MEMORANDUM TO: Brian E. Thomas, Director
Division of Engineering
Office of Nuclear Regulatory Research

FROM: Ian C. Jung, Chief **/RA/**
Instrumentation, Controls, and Electrical Engineering Branch
Division of Engineering
Office of Nuclear Regulatory Research

SUBJECT: RESULTS OF PERIODIC REVIEW OF REGULATORY GUIDE
(RG) 1.180

This memorandum documents the U.S. Nuclear Regulatory Commission's (NRC's) periodic review of Regulatory Guide (RG) 1.180, "Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems." Revision 1 of RG 1.180 was issued in October 2003 to endorse, in part and with certain clarifications, multiple consensus standards and guidance documents issued by the U.S. Military (MIL-STD), International Electrotechnical Commission (IEC), the Institute of Electrical and Electronics Engineers (IEEE), the Electric Power Research Institute (EPRI), and Oak Ridge National Laboratories (ORNL) in the U.S. Department of Energy (DOE).

Many of the standards and guidance documents endorsed by the 2003 revision of RG 1.180 have been updated to incorporate additional guidance and improved methods for evaluating the effects of electrostatic discharge, as well as improvements in the operational environment at nuclear power plants arising from the increased use of digital technology, including wireless communication for both personnel (personal digital assistants and smartphones) and industrial (remote I&C) applications.

As discussed in Management Directive 6.6, "Regulatory Guides," the NRC staff reviews RGs approximately every 5 years (10 years following this review) to ensure that the RGs continue to provide useful guidance. Documentation of the NRC staff review is enclosed.

Based on the results of the periodic review, the staff concludes that RG 1.180 should be revised to address the newer consensus guidance documents. The staff is currently working with ORNL to develop revision 2 of RG 1.180 and should deliver a draft RG to the Regulatory Guidance and Generic Issues Branch within 6 to 12 months.

Enclosure:
As stated

CONTACT: David Dawood, RES/DE/ICEEB
301-415-2389

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Tom Boyce, RES/DE/RGGIB,
Mark Orr RES/RGGIB

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OFFICE	RES/DE/ICEEB	SUNSI Review	RES/DE/RGGIB	RES/DE/ICEEB	RES/DE/ICEEB
NAME	D. Dawood	D. Dawood	M. Orr	K. Miller	I Jung
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