



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 18, 2022

MEMORANDUM TO: Joy L. Rempe, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

FROM: Raymond V. Furstenau, Director
Office of Nuclear Regulatory Research

A handwritten signature in black ink, appearing to read "RF", written over a horizontal line.

Coffin, Stephanie signing on
behalf of Furstenau,
Raymond
on 10/18/22

SUBJECT: STAFF RESPONSE TO ACRS LETTER, DATED SEPTEMBER 27,
2022, IN REGARD TO PROPOSED NEW REGULATORY GUIDE
1.250, "DEDICATION OF COMMERCIAL-GRADE DIGITAL I&C
ITEMS FOR USE IN NUCLEAR POWER PLANTS"

The purpose of this memorandum is to provide the U.S. Nuclear Regulatory Commission (NRC) staff's response to the Advisory Committee on Reactor Safeguards (ACRS) letter dated September 27, 2022, (Agencywide Document Access and Management System (ADAMS) Accession No. ML22264A193) on the proposed new Regulatory Guide (RG) 1.250, "Dedication of Commercial-Grade Digital I&C Items for Use in Nuclear Power Plants," (ADAMS Accession No. ML22003A180).

During the 698th meeting of the ACRS, September 7-9, 2022, the Committee reviewed proposed new Regulatory Guide (RG) 1.250. In addition, the ACRS Digital Instrumentation and Control (DI&C) Systems Subcommittee (SC) reviewed this matter on July 21, 2022. In the letter dated, September 27, 2022, the ACRS provided conclusions and recommendations on proposed new RG 1.250.

The staff has carefully considered the Committee's feedback to ensure the RG adequately addresses the stated concerns as well as the needs of other internal and external stakeholders. In response, the staff has updated Section B, "Discussion," of RG 1.250 to include the following paragraph:

The application of digital technology to the design and configuration of nuclear power plant safety systems requires careful consideration of NRC guidance pertaining to safety system architecture, failure modes and effects analysis, and the application of defense in depth principles. Prior to the selection of equipment to be used in accomplishing the required safety functions, a proposed digital safety system design should be completed, evaluated, and accepted to the extent that all required characteristics of the proposed digital safety system design have been identified and specified, and the dedication process only begins when the design is complete and accepted. The equipment that is selected to perform the required safety functions must be shown to meet applicable technical and quality requirements.

CONTACTS: Dinesh Taneja, NRR/DEX/ELTB
301-415-0011

Michael Eudy, RES/DE/RGPMB
301-415-3104

The staff plans to issue RG 1.250 within one week of this memorandum. In addition, upon issuance of the RG, the staff will be updating Inspection Procedure (IP)-71111, Attachment 21N.03, "Commercial Grade Dedication," (ADAMS Accession No. ML22075A251). The updates will include references to RG 1.250 and associated guidance documents for dedication of commercial digital equipment. Accordingly, the training program on this inspection procedure for the NRC inspectors will also be updated.

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 IN REGARD TO PROPOSED NEW REGULATORY GUIDE 1.250,
 DEDICATION OF COMMERCIAL-GRADE DIGITAL I&C ITEMS FOR USE
 IN NUCLEAR POWER PLANTS”: DATED: OCTOBER 18, 2022

Reference Ticket: OEDO-22-00416-RES

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ADAMS Accession Nos: Memo: ML22279B059 *via E concurrence

OFFICE	RES/DE/RGPMB	NRR/DEX/ELTB TL	NRR/DRO/IQVB	NRR/DEX/ELTB BC
NAME	M. Eudy	D. Taneja	G. Galletti	J. Paige
DATE	10/07/2022	10/07/2022	10/11/2022	10/11/2022
OFFICE	RES/DE/RGPMB BC	NRR/DEX Dir	RES/DE Dir	RES Dir
NAME	M. Rahimi	E. Benner	L. Lund	R. Furstenau S. Coffin for
DATE	10/13/2022	10/13/2022	10/17/2022	10/18/2022

**All concurrence received via Email or
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