
POLICY ISSUE
(Information)

July 26, 2018

SECY-18-0074

FOR: The Commissioners

FROM: Margaret M. Doane
Executive Director for Operations

SUBJECT: INCORPORATION BY REFERENCE OF ELECTRIC POWER RESEARCH
INSTITUTE REPORT MRP-335, REVISION 3-A, "MATERIALS RELIABILITY
PROGRAM: TOPICAL REPORT FOR PRIMARY WATER STRESS
CORROSION CRACKING MITIGATION BY SURFACE STRESS
IMPROVEMENT," INTO 10 CFR 50.55a

PURPOSE:

The purpose of this paper is to inform the Commission of the staff's intent to incorporate by reference Electric Power Research Institute (EPRI) report MRP-335, Revision 3-A, "Materials Reliability Program: Topical Report for Primary Water Stress Corrosion Cracking Mitigation by Surface Stress Improvement," into Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a, "Codes and Standards." The staff intends to include this topical report in the rulemaking currently in progress to incorporate by reference the 2015 and 2017 editions of American Society of Mechanical Engineers (ASME) codes for nuclear power plants. The staff expects this rule to be finalized in 2019. This paper does not address any new commitments or resource implications.

BACKGROUND:

In 2016, EPRI submitted MRP-335, Revision 3-A, and the NRC approved it as a generic methodology to support development of plant-specific relief requests to obtain inspection credit following peening.¹ (The report is publicly available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML16319A282.)

CONTACT: Jay Collins, NRR/DMLR/MPHB
301-415-4038

¹ Peening for use on nuclear grade piping and components uses a variety of specialized methods (e.g., water jet, cavitation, and laser) to put the wetted surface of a susceptible material into a compressive stress state. If properly applied, this compressive stress state will help prevent the initiation of new fatigue and stress corrosion cracking without damaging the original material.

Revision 3-A of the MRP-335 report incorporated the NRC safety evaluation of MRP-335 which had been originally submitted for staff review in 2013. It provides an NRC-approved qualification methodology, performance criteria, and inspection requirements both for application and long-term inservice inspection of any generic peening application on Class 1 dissimilar metal butt welds and the reactor pressure vessel upper head penetration nozzles and welds.

The staff intends to incorporate this document by reference to reduce burden on both licensees and the NRC staff. This action will eliminate the need for licensees to submit a plant-specific relief request to obtain inspection credit for peening.² Currently, to obtain inspection credit under 10 CFR 50.55a(g)(6)(ii)(D) and 10 CFR 50.55a(g)(6)(ii)(F) for peening, licensees must submit a plant-specific relief request for NRC approval. Since the issuance of MRP-335, Revision 3-A, in 2016, the NRC has approved four of these types of requests.

The NRC has a well-established practice of approving or mandating the use of certain parts of editions of ASME Codes in 10 CFR 50.55a through the rulemaking process of incorporation by reference. This practice increases consistency across the industry and demonstrates that the NRC will continue to support the use of the most updated and technically sound techniques developed by the ASME to provide adequate protection to the public. This rulemaking also enhances the efficiency and effectiveness of the NRC's regulations by making use of current voluntary consensus standards and is consistent with applicable requirements of the National Technology Transfer and Advancement Act. The Commission originally established the delegation of authority for this type of rulemaking to the Executive Director for Operations (EDO) in the SRM for SECY-76-389 (ADAMS Accession No. ML091470326) and approved the staff's rulemaking plan to conduct subsequent rulemakings to update 10 CFR 50.55a in SRM-SECY-03-0078 (ADAMS Accession No. ML031500583). The EDO delegated signature authority for these rulemakings to the Director of the Office of Nuclear Reactor Regulation (NRR) in a memorandum dated February 5, 2010 (ADAMS Accession No. ML091730349), and the Commission was informed of this in SECY-10-0016 (ADAMS Accession No. ML092730272). These delegations of authority are documented in Management Directive 6.3, "The Rulemaking Process," approved July 22, 2013 (ADAMS Accession No. ML13205A400).

DISCUSSION:

In the latest proposed rulemaking to allow licensees to use up to the 2017 Edition of the ASME Code, there are draft proposed conditions to allow peening inspection credit without a plant-specific relief request, but only if licensees follow the requirements of MRP-335, Revision 3-A. The use of MRP-335, Revision 3-A, is included as a condition on the requirements of the ASME Code. Accordingly, the staff has determined that it is appropriate to incorporate by reference MRP-335, Revision 3-A, as part of this rulemaking.

The Commission has previously delegated the signature authority for this rulemaking activity to the staff because it is a routine rulemaking that does not affect agency policy. MRP-335, Revision 3-A, is a publicly available EPRI document and not a specific national code or

² Inspection credit allows the licensee to extend the required volumetric inspection frequency. For example, in the case of a licensee having previously cracked penetration nozzles in the upper reactor pressure vessel head, inspection credit for peening extends a volumetric inspection requirement from each outage to every 10 years.

standard.³ The staff questioned whether incorporating MRP-335, Revision 3-A, by reference is strictly within the Commission's allowances for the delegation of this rulemaking activity to the staff. To help answer this question, the staff referred to the guidance documents above, including SRM-SECY-76-389, which states the following:

The Commission, by a vote of 3-0,⁴ approved the amendment of the delegation of authority to the Executive Director for Operations by addition of the following authority: Issue proposed rules, and rules in final form, amending the Commission's regulations to incorporate by reference national codes and standards, including revised editions and addenda thereto, if the amendments are routine in nature and represent updating of basic codes and standards previously approved by the Commission for incorporation by reference.

The staff has determined that the EPRI document can be incorporated by reference under SECY-76-389 because the staff's use of MRP-335, Revision 3-A, is only as a condition on the requirements of the ASME Code. MRP-335, Revision 3-A, is the NRC-approved methodology to obtain inspection credit for peening, which is allowed by the ASME Code. Further, the staff's review and approval of this methodology involved significant stakeholder interaction through public meetings and publicly available requests for additional information and responses. Therefore, the staff has determined that this action is routine in nature and it is within the delegation of authority in the SRM to SECY-76-389, SRM-SECY-03-0078, and Management Directive 6.3.

Normally, the staff notifies the Commission after the NRR Director approves proposed or final rules to update 10 CFR 50.55a and then waits 10 days before proceeding with publication. However, the staff has determined that because MRP-335, Revision 3-A, would be the first EPRI document incorporated by reference in 10 CFR 50.55a, earlier notification of the Commission via this paper is prudent.

CONCLUSION:

This paper informs the Commission that the staff intends to incorporate MRP-335, Revision 3-A, by reference into 10 CFR 50.55a. The staff will also provide the normal 10-day notification prior to publication of the proposed and final rule. Once finalized, this rule, in part, will allow licensees to implement inspection credit from the current regulations for peening of welds and upper heads without a plant-specific relief request. The Commission will be notified if there are significant adverse comments on the proposed rule regarding incorporation of this methodology.

³ The document is publicly available on EPRI's public Web site at <https://www.epri.com>. EPRI has agreed, in writing, to allow the NRC to incorporate the document by reference into 10 CFR 50.55a. (ADAMS Accession No. [ML18164A079](#)).

⁴ Commissioner Gilinsky was not present.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections.

/RA/

Margaret M. Doane
Executive Director
for Operations

SUBJECT: INCORPORATION BY REFERENCE OF ELECTRIC POWER RESEARCH INSTITUTE REPORT MRP-335, REVISION 3-A, "MATERIALS RELIABILITY PROGRAM: TOPICAL REPORT FOR PRIMARY WATER STRESS CORROSION CRACKING MITIGATION BY SURFACE STRESS IMPROVEMENT," INTO 10 CFR 50.55a

Accession Nos. SECY Paper: ML18170A280

***via e-mail**

OFFICE	NRR/DMLR/MPHB	NRR/DMLR/MRPB	NRR/DMLR/MPHB	NRR/DMLR/MENB*	NRR/DMLR*
NAME	JCollins	YEdmonds	SRuffin	CHsu	GWilson
DATE	06/12/2018	06/13/2018	06/13/2018	06/18/2018	06/15/2018
OFFICE	NRR/DE*	NMSS/DRM/RRPB*	NMSS/DRM/RASB*	NMSS/DRM/RRPB*	NMSS/DRM*
NAME	EBenner	JO'Driscoll	CBladey (RSchofer for)	YMalave-Velez (MKhanna for)	TClark (PHolahan for)
DATE	06/20/2018	06/15/2018	06/15/2018	06/18/2018	06/20/2018
OFFICE	NRO*	RES*	OGC* NLO	NRR	EDO
NAME	FBrown	MWeber	LSheldon Clark	BHolian (MGE for)	MDoane
DATE	06/25/2018	06/20/2018	06/29/2018	07/05/2018	07/26/2018

OFFICIAL RECORD COPY