

STATUS OF NRC ACTIVITIES OF POTENTIAL INTEREST TO OM STANDARDS COMMITTEE

**Nicholas J. Hansing, Mechanical Engineer
Mechanical Engineering and Inservice Testing Branch
Division of Engineering and External Hazards
NRC Office of Nuclear Reactor Regulation**

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10 CFR 50.55a Code Edition Rulemaking

Title 10 of the *Code of Federal Regulations* (10 CFR) in Section 50.55a, “Codes and standards,” incorporates by reference specific editions and addenda of the American Society of Mechanical Engineers (ASME) *Operation and Maintenance of Nuclear Power Plants*, Division 1, OM Code: Section IST (OM Code), and the ASME *Boiler and Pressure Vessel Code* (BPV Code), Sections III and XI.

On October 27, 2022, the U.S. Nuclear Regulatory Commission (NRC) issued a final rulemaking to amend 10 CFR 50.55a to incorporate by reference the 2019 Edition to the ASME BPV Code, Section III, Division 1, and Section XI, Division 1, with conditions; and the 2020 Edition to Division 1 of the ASME OM Code, with conditions. See *Federal Register* Notice 87 FR 65128, dated October 27, 2022.

On August 8, 2023, the NRC staff issued a proposed rule to incorporate by reference the 2021 Edition of the ASME BPV Code, Division 1, Sections III and XI, and the 2022 Edition of the ASME OM Code, with conditions as appropriate.

Two proposed conditions in the rulemaking are as follows:

10 CFR 50.55a(b)(3)(vii), OM Condition: *Snubber visual examination interval extension*. Proposes to clarify when implementing OM Code, Subsection ISTD, paragraph ISTD-4253, and Note 7 of Table ISTD-4252-1 in the 2022 Edition of the ASME OM Code, licensees are prohibited from applying Code Case OMN-15, Revision 2 or Revision 3, to extend snubber test interval because Section 3.4 of Code Case OMN-15 specifies that OMN-15 shall not be used in conjunction with Code Case OMN-13, which has been incorporated into the 2022 Edition of the ASME OM Code, Subsection ISTD.

10 CFR 50.55a(b)(3)(x), OM Condition: *Class 1 pressure relief valve sample expansion*. Proposes to clarify that for each Class 1 Pressure Relief Valve tested per the ASME OM Code, Mandatory Appendix I, paragraph I-1320(c)(1), for which as-found set-pressure exceeds the plus/minus tolerance limit of the Owner-established design set-pressure acceptance criteria of paragraph I-1310(e) or +/- 3% of nameplate set-pressure if the Owner has not established design set-pressure acceptance criteria, two additional valves shall be tested from the same valve group.

For licensees implementing the 2022 Edition of the ASME OM Code, the proposed rulemaking would remove the following conditions:

10 CFR 50.55a(b)(3)(ii), *OM Condition: Motor-Operated Valve (MOV) testing*, paragraphs (A), (B), and (C).

10 CFR 50.55a(b)(3)(iii)(B), *New Reactors OM Condition: Check valves*.

10 CFR 50.55a(b)(3)(iii)(C), *New Reactors OM Condition: Flow-induced vibration*.

The NRC staff is reviewing the public comments on the proposed rule with issuance of the final rule scheduled for January 2025.

10 CFR 50.55a Code Case Rulemaking

In early 2022, the NRC issued a final rulemaking incorporating by reference into 10 CFR 50.55a revised NRC regulatory guides (RGs) that address the acceptability of ASME Code Cases in the *Federal Register* on March 3, 2022 (87 FR 11934) with an effective date of April 4, 2022. In particular, Revision 4 of RG 1.192, Revision 39 of RG 1.84, and Revision 20 of RG 1.147 address the acceptability of ASME OM Code Cases published during the similar time period as the 2020 Edition of the ASME OM Code and available on the ASME Codes & Standards (C&S) Connect Website; and specific ASME BPV Code Cases. RG 1.192, Revision 4, accepts new ASME OM Code Cases OMN-22 through OMN-27 without conditions. Other ASME OM Code Cases remain the same in Revision 4 to RG 1.192 as the previous Revision 3 to RG 1.192.

On March 6, 2023 (88 FR 13717), the NRC issued a proposed rule to address the acceptability of recent ASME BPV Code Cases and OM Code Cases by updating the applicable RGs. The proposed rule also requested public comments on a possible extension of the Code of Record (COR) update requirement in 10 CFR 50.55a from 10 years to 20 or 24 years for those licensees that are implementing (as their IST and Inservice Inspection (ISI) CORs) the 2020 Edition of the ASME OM Code and 2019 Edition of the ASME BPV Code, or later editions and addenda, as incorporated by reference in 10 CFR 50.55a. For a licensee implementing this recent Code edition or later edition as its IST/ISI Program COR, the rule proposes a 20-year or 24-year COR update interval requirement depending on whether the licensee is implementing a 10-year or 12-year OM Examination and Test interval and Section XI Inspection interval as applicable to the ASME OM and BPV Codes. For background information, see NRC Commission Paper SECY-21-0029 (March 15, 2021), "Rulemaking Plan on Revision of Inservice Testing and Inservice Inspection Program Update Frequencies Required in 10 CFR 50.55a" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20273A286); Staff Requirements Memorandum SRM-SECY-21-0029 (November 8, 2021) (Accession No. ML21312A490); and Commission Paper SECY-22-0075 (August 10, 2022), "Staff Requirements SECY-21-0029 Inservice Testing and Inservice Inspection Program Rulemakings Update" (Accession No. ML22124A178). Draft RG 1.192, Revision 5 (DG-1407) accepts new ASME OM Code Cases OMN-28 through OMN-30 without conditions, and OMN-31 with conditions. Based on a public request, the NRC extended the public comment period for the proposed rule to June 16, 2023. The NRC staff is reviewing the public comments with issuance of the final rule scheduled for August 2024.

ASME Code on “Component Testing Requirements at Nuclear Facilities” (OM-2) Project

ASME is preparing a new Code (referred to as OM-2) for inservice testing of pumps, valves, and dynamic restraints (and other-named components that perform similar functions) that may be used in new and advanced nuclear facilities that will include water-cooled and non-water-cooled reactors. The ASME task group has addressed comments provided during the balloting process. ASME is completing the balloting process for the new OM-2 Code. The NRC staff plans to review the new OM-2 Code for acceptance with applicable conditions in a new regulatory guide when the OM-2 is available as a public document. The NRC staff considers it important to have the new code available for nuclear facility applicants for planning their IST programs when interacting with the NRC.

Reformatted ASME QME-1. “Qualification of Active Mechanical Equipment Used in Nuclear Facilities.” Project

ASME is preparing a reformatted version of ASME Standard QME-1 to provide qualification provisions for active mechanical equipment to be used in new and advanced nuclear facilities. The reformatted QME-1 Standard will allow its more effective use by applicants for the construction and licensing of non-water-cooled reactors. The NRC staff plans to revise RG 1.100, “Seismic Qualification of Electrical and Active Mechanical Equipment and Functional Qualification of Active Mechanical Equipment for Nuclear Power Plants,” to accept with applicable conditions the ASME QME-1-2023 Standard and the reformatted QME-1 Standard (when available as a public document).

NRC Staff Review of Technical Specification Task Force (TSTF) Proposals

The NRC staff is reviewing several draft TSTF documents with coordination between the NRC IST staff and the Technical Specifications staff. For example, the NRC staff is reviewing TSTF-576, “Revise Safety/Relief Valve Requirements,” that would allow the consideration of the safety relief valves in boiling water reactors as a group rather than individually for meeting Technical Specification requirements. The implementation of TSTF documents might result in the need for additional attention to ensure that both the ASME OM Code and the Technical Specifications continue to be met. Specific to TSTF-576, where the traveler identifies an instance where a licensee must request guidance, relief, or an alternative to the ASME OM Code – it may prove beneficial to consider a standardized approach for pursuing this option.

Extended Operating Cycles for Pressurized Water Reactor (PWR) Nuclear Power Plants

Fuel enrichment improvements might allow PWR nuclear power plants to implement longer operating cycles. In preparation for these extended operating cycles, PWR licensees should ensure that performance data are available for IST components to provide confidence in extending the test intervals for those components. In addition, PWR licensees should ensure that the plant-specific IST Program is updated to reflect this interval change for the applicable components.

Pressurizer Safety Valve Steam Cutting Failure

At the March 2024 Reactor Oversight Process Public Meeting, the NRC staff discussed a Pressurizer Safety Valve failure that recently occurred at Farley Unit 2 (ML24080A099). Due to excessive steam cutting of the valve disc insert and nozzle, the device failed to lift during as-found testing without mechanical assistance. Steam cutting was not commonly known as a

failure mechanism for safety/relief valves. Licensees should be aware of this failure mechanism as a potential safety concern. The NRC staff is continuing to monitor operating experience and industry activities related to this failure mechanism.

Proposed Revision to NUREG-1482

The NRC staff is preparing the next revision to NUREG-1482, “Guidelines for Inservice Testing at Nuclear Power Plants, Inservice Testing of Pumps and Valves and Inservice Examination and Testing of Dynamic Restraints (Snubbers) at Nuclear Power Plants.” A public meeting was held on May 7, 2024, to discuss possible improvements to the guidance in NUREG-1482 as suggested by the Inservice Testing Owners Group (available at ML24124A000). Further public engagement is anticipated once the staff begins the revision process.

Motor-Operated Valve Backseating

The NRC staff notes that equipment used on safety-related components need to be qualified, calibrated, and controlled as part of the Quality Assurance Program. This includes equipment, such as a backseating tool, which has been proposed for use in electrically backseating motor-operated valves (MOVs). Caution is strongly urged when considering the use of this tool or similar equipment when electrically backseating MOVs, due to the potential to adversely affect the valve’s functional capability. As discussed in NUREG-1482, the backseating process is a high consequence activity that could result in damage to the valve. NUREG-1482 provides guidance for remaining within the scope of ASME OM Code, paragraph ISTC-3310, to avoid the potential for a valve stem to stick in the backseat by briefly bumping the MOV off the backseat. When using this guidance, an alternative request under 10 CFR 50.55a(z) is not required when backseating an MOV. Therefore, this should be considered when planning MOV backseat evolutions.

10 CFR 50.36, “Technical specifications,” and 10 CFR 50.55a, “Codes and standards”

The NRC regulations in 10 CFR 50.36 and 10 CFR 50.55a specify separate requirements for a licensee of a nuclear power plant. For example, if the ASME OM Code as incorporated by reference in 10 CFR 50.55a requires specific actions to be taken by a licensee (such as actions to be taken following an IST failure), the licensee is required to take those actions or must submit a relief or alternative request in accordance with the regulatory process specified in 10 CFR 50.55a. In addition, many surveillance requirements in technical specifications refer to the IST Program under 10 CFR 50.55a(f) for the specific frequency in performing the surveillance requirement. Therefore, it is important to consider the potential impact on the surveillance requirement frequency in technical specifications when revising the testing requirements in the ASME OM Code as incorporated by reference in 10 CFR 50.55a.

NRC/ASME O&M Code and IST Symposium

NRC/ASME OM (formally Pumps, Valves, and Snubbers) Fifteenth Symposium is being planned for July 2025.

ASME-Related Generic Communications and Regulatory Guides

No ASME-related generic communications or regulatory guides have been issued by the NRC since the last report (December 2023) to the ASME OM Standards Committee.