STATUS OF NRC ACTIVITIES OF POTENTIAL INTEREST TO OM MAIN COMMITTEE

Robert Wolfgang, Senior Mechanical Engineer
Component Performance, NDE, and Testing Branch
Division of Engineering
NRC Office of Nuclear Reactor Regulation

ASME OM Code Committee Meeting on December 9-11
At Clearwater Beach, FL

10 CFR 50.55a Rulemaking

Title 10 of the *Code of Federal Regulations* (10 CFR) in Section 50.55a, "Codes and standards," currently incorporates by reference the 2005 and 2006 Addenda of the American Society of Mechanical Engineers (ASME) *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code), the 2005 Addenda through 2008 Addenda of ASME *Boiler and Pressure Vessel Code* (BPV Code), Section XI, and 2005 Addenda through 2008 Addenda of the ASME BPV Code, Section III, with conditions. Section 50.55a also incorporates by reference selected previous editions and addenda of the ASME OM and BPV Codes, with conditions.

In a rulemaking issued on September 18, 2015, in the *Federal Register* (80 FR 56820), the U.S. Nuclear Regulatory Commission (NRC) proposed to amend 10 CFR 50.55a to incorporate by reference:

The 2009 Addenda, 2010 Edition, 2011 Addenda, and 2013 Edition to the ASME BPV Code, Section III, Division 1, and Section XI, Division 1, with conditions.

The 2009 Edition, the 2011 Addenda, and the 2012 Edition to Division 1 of the ASME OM Code, with conditions.

ASME Standard NQA-1, ''Quality Assurance Requirements for Nuclear Facility Applications,'' including the 1983 Edition through the 1994 Edition, the 2008 Edition, and the 2009-1a Addenda to the 2008 Edition of ASME NQA-1, with conditions.

ASME BPV Code Case N-729-4, ''Alternative Examination Requirements for PWR Reactor Vessel Upper Heads With Nozzles Having Pressure-Retaining Partial-Penetration Welds Section XI, Division 1,'' with conditions.

ASME BPV Code Case N-770-2, ''Alternative Examination Requirements and Acceptance Standards for Class 1 PWR Piping and Vessel Nozzle Butt Welds Fabricated with UNS N06082 or UNS W86182 Weld Filler Material With or Without Application of Listed Mitigation Activities, Section XI, Division 1,'' with conditions.

ASME BPV Code Case N-824, ''Ultrasonic Examination of Cast Austenitic Piping Welds From the Outside Surface Section XI, Division 1.''

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ASME OM Code Case OMN-20, ‘‘Inservice Test Frequency.’’

Specific items of interest in the proposed rulemaking related to the OM Code include:

1. Incorporation by reference of the ASME NQA-1 Standard.

2. Conditions on the use of Appendix III, ‘‘Preservice and Inservice Testing of Active Electric Motor Operated Valve Assemblies in Light-Water Reactor Power Plants,’’ including motor-operated valve initial diagnostic test intervals, testing interval impact on risk, allowable categorization methods, and verification during exercising that stroke time satisfies plant safety analyses.

3. New reactor conditions, including power-operated valve (POV) periodic verification, check valve bidirectional testing, flow-induced vibration monitoring, and operational readiness of pumps, valves, and dynamic restraints in high risk non-safety systems.

4. Clarification of check valve monitoring provisions.

5. Condition requiring proposed implementation of Subsection ISTE, ‘‘Risk-Informed Inservice Testing of Components in Light-Water Reactor Nuclear Power Plants,’’ to be submitted for NRC staff review as an alternative pursuant to 10 CFR 50.55a(z).

6. Condition requiring implementation of Appendix V, ‘‘Pump Periodic Verification Test Program,’’ when applying Subsection ISTF, ‘‘Inservice Testing of Pumps in Light-Water Reactor Nuclear Power Plants - Post-2000 Plants.”

7. Incorporation by reference of ASME OM Code Case OMN-20.

8. Condition supplementing ISTC-3700, ‘‘Position Verification Testing,’’ for valve position indication.

9. Clarification that pumps and valves that are within the scope of the ASME OM Code must meet the inservice test requirements set forth in the ASME OM Code and addenda to the extent practical.

In the *Federal Register* notice, the NRC staff stated that the public comment period would end on December 2, 2015. The NRC staff will review the public comments received on the proposed rulemaking, and prepare a final rulemaking package in 2016.

Regulatory Guide (RG) Update – OM Code Case Acceptability

Revision 1 of RG 1.192, Revision 36 of RG 1.84, and Revision 17 of RG 1.147 address the acceptability of code cases published in the 2003 Addenda through the 2006 Addenda of the ASME OM Code and the Sections III and XI code cases listed in Supplements 1 through 10 to the 2007 Edition of the ASME BPV Code. The current regulations in 10 CFR 50.55a incorporate by reference these specific revisions to RGs 1.192, 1.84, and 1.147.

The NRC staff has completed a review of the new and revised code cases published in the 2009 Edition, 2011 Addenda, and 2012 Edition of the ASME OM Code. The proposed rulemaking and RGs for these code cases are currently scheduled to be published for public comment in December of 2015. Each code case in RG 1.192 will be identified by the number assigned by the OM Code and the applicable edition or addendum of the OM Code with which it is first published.

Main Steam Isolation Valve (MSIV) Failures

The NRC staff is considering issuance of an information notice to inform nuclear power plant licensees and applicants of recent operating experience involving MSIV failures. The NRC established Generic Safety Issue 158, "Performance of Safety-Related Power-Operated Valves Under Design Basis Conditions," after reactor operating experience and research results on power-operated valves (POVs) indicated that testing methods in use at the time were insufficient to demonstrate consistent performance of these valves under design-basis conditions. In Regulatory Issue Summary (RIS) 2000-003, “Resolution of Generic Safety Issue 158: Performance of Safety-Related Power-Operated Valves under Design Basis Conditions,” the NRC staff provided a summary of the NRC’s historical concerns associated with POV performance. In RIS 2000-003, the NRC staff stated that it would continue to work with industry groups on an industry-wide approach to the POV issue and to provide timely, effective, and efficient resolution of the concerns regarding POV performance. The NRC continues to monitor licensees' activities and operating experience to ensure that POVs are capable of performing their specified safety-related functions under design-basis conditions. The information notice on MSIV failures is an example of the NRC staff’s continuing attention to POV performance.

Service Life of Nuclear Power Plant Components

Operating experience has identified failures of safety-related equipment at nuclear power plants caused by age-related degradation. The NRC documented its review of component age-related failures in “IOEB Analysis Team Study on Component Aging-Insights from Inspection Findings and Reportable Events” (ADAMS Accession No. ML13044A469). A key observation from the IOEB study is the increasing trend of safety-related structures, systems, and components (SSCs) in service beyond their documented service life without proper engineering evaluations. The NRC staff is continuing its review of operating experience related to component service life.

ASME OM Code Testing Using Laptop Computers

The ASME OM Code sets the requirements for monitoring the operational readiness of safety-related components. Test equipment used to meet ASME OM Code requirements continue to improve on a daily basis. One of the most significant improvements in recent years is the use of portable laptop computers and software analysis tools.

During the last year, it was noted by NRC staff on routine inspections that computers used to set and verify safety-related components (e.g., motor-operated valves, air-operated valves, pumps, etc.) had contracted a virus. Licensees are reminded that laptop computers used to set, calibrate, and/or verify safety-related component performance need to follow the rules of 10 CFR Part 50, Appendix B, Section XII, “Control of Measuring and Test Equipment.”

ASME-Related Generic Communications

ASME-related generic communications issued by (or in the process of being issued by) the NRC Office of Nuclear Reactor Regulation (NRR) and Office of New Reactors (NRO) since the last report (July 2015) to the OM Standards Committee are listed below:

Bulletins (BLs)

None

Generic Letters (GLs)

None

Information Notices (INs)

IN 2015-09 (09/24/2015)	Mechanical Dynamic Restraint (Snubber) Lubricant Degradation Not Identified due to Insufficient Service Life Monitoring

Regulatory Issue Summaries (RISs)

RIS 2015-08 (6/24/2015)	Oversight of Counterfeit, Fraudulent and Suspect Items in the Nuclear Industry
RIS 2015-10 (7/16/2015)	Applicability of ASME Code Case N-770-1 as Conditioned in 10 CFR 50.55a, "Code and Standards," to Branch Connection Butt Welds

The full text of any of these NRC generic communications can be accessed by visiting the NRC's public website at http://www.nrc.gov/reading-rm/doc-collections/gen-comm/index.html.