

## U.S. Nuclear Regulatory Public Meeting Summary

September 21, 2016

**Title:** Public Meeting to Discuss Rulemaking to Incorporate by Reference American Society of Mechanical Engineers Codes into the U.S. Nuclear Regulatory Commission Regulations

**Meeting Identifier:** 20160898

**Date of Meeting:** August 22, 2016

**Location:** Hyatt Regency Washington on Capitol Hill, Regency A Ballroom Level  
400 New Jersey Ave NW Washington, DC

**Type of Meeting:** Category 3

**Purpose of the Meeting(s):** The purpose of this meeting was to provide information about an upcoming proposed rule to incorporate by reference American Society of Mechanical Engineers (ASME) Codes into the U.S. Nuclear Regulatory Commission (NRC) regulations. Specifically, the NRC intends to incorporate by reference the 2015 Edition of the ASME Boiler and Pressure Vessel Code (BPV Code), Section III, Division 1, and the ASME BPV Code, Section XI, Division 1 into Section 50.55a, "Codes and standards," of Title 10 of the *Code of Federal Regulations* (10 CFR). The NRC also intends to incorporate by reference the 2015 Edition of Operation and Maintenance of Nuclear Power Plants, "Division 1, OM Code: Section IST" (OM Code) into 10 CFR 50.55a.

**General Details:** Representatives included participants attending the ASME Boiler and Pressure Vessel Code Week. In total, there were approximately 148 participants in this meeting. A facilitated bridgeline was used for this meeting to coordinate incoming feedback received from the attendees that participated by phone. A list of attendees is provided as an attachment to this meeting summary.

The meeting was scheduled from 5:30 – 7:30 p.m. Approximately 126 people were present during the meeting, which included NRC staff and external stakeholders. There were 22 people participating in the meeting remotely using a teleconference line. The meeting began with a discussion of the purpose and overview of the meeting. Next, information regarding the scope of the three 10 CFR 50.55a rulemakings was presented, after which technical information was presented by NRC staff. The NRC staff then opened the meeting for questions or comments from the public, explaining that the comments and suggestions provided by the attendees would be considered in preparing the proposed rule, but that the NRC would not prepare formal responses to these questions and comments.

**Summary of Presentations:** Daniel Doyle, Project Manager, Division of Policy and Rulemaking, Office of Nuclear Reactor Regulation, provided opening remarks and presented information regarding the status of the 10 CFR 50.55a rulemakings (ASME BPV/OM 2009-2013 Editions/Addenda, ASME Code Case Regulatory Guides, and the ASME 2015 Editions). The

NRC technical subject matter experts presented information on the conditions under consideration. At the end of the technical discussions, the NRC staff addressed questions from stakeholders regarding items of interest in the rulemaking process and conditions under consideration.

The first technical presentation was provided by Dr. Chakrapani Basavaraju and focused on incorporating, by reference into 10 CFR 50.55a, the 2015 Edition of the ASME BPV Code, Section III, including the five (5) parts to the condition on Appendix XXVI, Rules for the Construction of Class 3 Buried Polyethylene Pressure Piping. One stakeholder asked why there was an NRC condition requiring periodic pressure tests for HDPE piping needed when Section XI already requires pressure testing. The stakeholder also asked what vehicle would be used for Section III to require periodic pressure tests. The NRC staff responded that the use of buried non-metallic piping in class 3 applications is new with a failure mode (slow crack growth) which is different from metallic materials. The installation under Section III class 3 should have provisions in the Section III design for periodic pressure testing under Section XI (IWD-5230(a).

Another stakeholder specified that there was a concern that these conditions would be too costly to use. The NRC staff acknowledged the comment.

The second presentation was provided by Keith Hoffman and focused on incorporating, by reference into 10 CFR 50.55a, the 2015 Edition of the ASME BPV Code, Section XI, including four (4) conditions being considered by the staff for ASME Section XI. Stakeholders asked two (2) questions for clarification regarding Section XI. The first question was in regard to how the staff planned to clarify the pressure testing requirements in 10 CFR 50.55a(b)(2)(xx)(B) and 10 CFR 50.55a(b)(2)(xxvi). The other question was related to the proposed condition on leak-chase channels and the questioner requested whether the NRC was aware of the ongoing work being done by ASME Section XI to address the leak-chase channel issue within the Code. The NRC responded that they were aware of the activity and would continue to participate in the development of new ASME Code language; however, the proposed condition would apply to the wording in the existing Editions of the Code.

Thirdly, Thomas Scarbrough discussed three (3) conditions being considered in relation to the 2015 Edition of the ASME OM Code. One condition involves the consideration of a requirement for nuclear power plant licensees to perform periodic verification of the design-basis capability of air-operated valves (AOVs) and hydraulic-operated valves (HOVs) determined to have high safety significance. Another condition involves the consideration of a requirement that licensees submit their IST Program Plan consistent with the current provisions in the ASME OM Code. In the third condition, the NRC staff is considering relaxing the time schedule for complying with the latest edition of the ASME OM Code for IST programs from 12 months to 18 months for initial IST programs and subsequent 10-year updates.

During the meeting, one stakeholder asked what the design-basis testing requirements would be for high safety significant AOVs and HOVs. The NRC staff responded that guidance is available that could be applied to a power-operated valve (POV) periodic verification program. Such guidance includes the MOV provisions in Appendix III to the ASME OM Code, the POV provisions in Regulatory Issue Summary (RIS) 2000-03, the guidance in the Joint Owners Group (JOG) AOV Program with the applicable NRC staff comments, the guidance in ASME OM Code Case OMN-12 with NRC Regulatory Guide (RG) 1.192 conditions, and the POV

operational programs described in the Final Safety Analysis Reports for new reactors (including Vogtle Units 3 and 4 and V.C. Summer Units 2 and 3).

Another stakeholder asked whether the proposed Appendix IV to the ASME OM Code, if approved, would be included in this rulemaking. The NRC staff member stated that the proposed Appendix IV for AOV IST provisions (as reviewed during the June 2016 OM Code meeting) was a reasonable effort to address the concerns that led to the condition being considered for POV periodic verification. The NRC staff indicated that the next rulemaking might incorporate, by reference, the 2016 Edition of the ASME OM Code if it includes Appendix IV and the new edition is issued in time to meet the rulemaking schedule. The NRC staff indicated that the proposed rulemaking should be issued for public comment in early 2017.

One stakeholder asked if the proposed rule will provide guidance on which risk ranking method is supposed to be used in 10 CFR 50.55a. The NRC staff responded that the probabilistic risk assessments (PRAs) that are currently in place at nuclear power plants that have been accepted by the NRC staff (such as the PRAs used as part of the JOG MOV periodic verification program) would be considered reasonable for an AOV periodic verification program.

One general question about the path forward was when the final rule for the 2009 to 2012 ASME OM Code will be published. The NRC staff answered that the end of the calendar year was the target goal.

Another question was asked by stakeholders in regard to whether the POV periodic verification condition might be removed if the 2016 Edition of the ASME OM Code included the new Appendix IV. The staff responded that if there is an opportunity to include Appendix IV, in the next rulemaking, then the POV periodic verification condition might be removed. However, this would depend on the timing of the rulemaking and the availability of the 2016 Edition of the ASME OM Code.

**Public Participation Themes:** The stakeholders appreciated the opportunity to discuss their respective comments on the rulemaking efforts. The information presented by the NRC staff and many of the responses to the comments were acceptable to the commenters.

**Action Items/Next Steps:**

- NRC staff will continue the process of completing the following:
  - Final Rule for the ASME BPV/OM 2009-2013 Editions/Addenda (NRC-2011-0088)
  - Final Rule for the ASME Code Case Regulatory Guides (NRC-2012-0059)
  - Proposed Rule for the ASME 2015 Editions (NRC-2016-0082)

**Attachments:**

- Meeting agenda ADAMS ML16222A465
- NRC presentation ADAMS ML16222A002
- Meeting attendees

<b>LIST OF ATTENDEES FOR 8/22/2016 CATEGORY 3 PUBLIC MEETING</b>	
<b>Name</b>	<b>Affiliation</b>
Daniel Doyle	NRC
Robert Ruttle	APS
Ronald Swain	EPRI
Steve Sabo	WESDYNE
Ed Pleins	Westinghouse
Junichi Hakai	Tokyo Electric Power
Hiroyuki Kabayashi	JAPC
Jeremy Mayo	TVA
YEON-KI CHUNG	KINS, Korea
SONG HYUNG GON	KHNP, Korea
Truong Vo	Dominion
Kevin Rhyne	Duke Energy
Faminoti Iwamaer	Hitachi
Jason Redd	Southern Nuclear
Glenn White	Dominion Engineering, Inc.
Koichi Kashima	CRIEPI
J. H. Riley	NEI
Yasukazu Takada	EPCO
Ben Montgomery	Inservice Engineering LLC
Bob Hardies	NRC
Lauren Powers	ASME
Joshua Grimm	Bechtel Power
Jay Wellwood	NAC International
Hongqing Xu	NuScale
Craig Scott	Areva
Paul Gionta	Westinghouse
Cheng Lin	Kinetrics
Rick Stevenson	Wectec GPS
Robin Dyle	EPRI
Jim E. Staffiera	Consultant

Corey Thomas	Southern Nuclear
Natreon Jordan	NRC
Al Meichler	True North Consulting
Ed Maloney	PSEG Nuclear
Jack Spanner	EPRI
Kimimaki	MHI
Seung-Gun Lee	KIMS
Brett McGlone	Swagelok
Rich McIntyre	NRC
Kevin Hacker	Dominion
Mark Dennis	EPRI
Gene Farrell	Exelon
Bryce Lehman	NRC
C. Basavaraju	NRC
Kamal Manoly	NRC
M. Orihuela	EPRI
M. McCallum	EPRI
Rick Rishel	WesDyne International
Mark Wilson	SNC
Anthony Bushmire	WesDyne
John Eastman	First Energy Corp.
Paul Fisher	Hartford Steam Boiler Insp. And Ins. Co.
Tim Nueffer	HSB GS
Marcellus Ruff	Exelon Generation
Tetsuya Nagata	Hitachi-GE Nuclear Energy
Gene Navratil	Exelon
Steve Bobyock	Exelon
Murkus Burkardt	Dominion Engineering, Inc.
Ed Gerlach	Gerlach Engineering
P.B. Shaw	Leak Testing Specialists, Inc.
Allyson Byk	ASME
Mark Ferris	Duke Energy

Raju B. Patel	NRC
Ashok Nana	AREVA
Charles J. Wirtz	EPRI
Henry Stephens	Stephens NDEF Services
Seija Asada	Mitsubishi Heavy Industries, Ltd.
Steve Norman	Sargent & Lundy
Scott Kulat	Inservice Engineering
Tim Griesbach	Structural Integrity Assoc.
Keith Hoffman	NRC
David Alley	NRC
Paul Donavan	DTE Energy
M. Rezaie-Manesh	Ontario Power Generation
Clint Shinsky	WesDyne
Adam Keiser	System One
Seung Min	NRC
Bruce Albee	Westinghouse
Steven Unikewicz	NuScale
Scott Kvasnicka	Exelon
Mark Hall	Dominion
Tim Wiger	AREVA
Giovanni Facco	NRC
Kevin May	Westinghouse
Ron Janowiak	Exelon
Bob McGill	Structural Integrity
Ron Lippy	True North Consulting
Muce Toreaso	NuVision Engineering
Chris Lohse	Structural Integrity Associates
Jeremy Timm	Curtiss-Wright LMT.
Bronson Shelly	PE&G
Dan Lamond	AMEC FW
Ryan Ziegler	BWXT
Spencer Toone	APS

Mari Saito	Japan Nuclear Safety Institute
Masawi Ando	Hitachi-GE Nuclear Energy
Steve Hunter	AREVA NP
Joe Weicks	Entergy
Rick Swayne	Reedy Engineering
Michael Benson	NRC
Nathan Palmer	EPRI
Brian Beviloequa	WEC
Augi Cardillo	Westinghouse
Safar Shojaei	STPNOC
Craig Younger	STPNOC
Brian Beley	NuVision Engineering
Warren Bamford	Westinghouse
Kevin Allen	First Energy
Stephen Marlette	Westinghouse
Bruce Pellegrino	Sensor Networks, Inc.
Danny Cordes	LMT-Curtis Wright
Mark Pyne	Duke Energy
Mike Briley	Entergy Nuclear
Myles Dunlop	EPRI
Masayuki Kamaya	INSS
A. Thomas Roberts	MPR Associates, Inc.
Roy Folley	Palo Verde NGS
Jeff Devers	Curtiss-Wright-LMT
David Arrigo	Westinghouse
Ryan Crane	ASME
Clayton Smith	Fluor
Steve McCracken	EPRI
Thiem Do	Southern Nuclear
Heather Malikowski	Exelon