

February 18, 2005

ORGANIZATIONS: AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) AND  
THE NUCLEAR ENERGY INSTITUTE (NEI)

SUBJECT: SUMMARY OF FEBRUARY 10, 2005 MEETING WITH THE PUBLIC,  
ASME, AND NEI TO DISCUSS ASME RISK-INFORMED CODE CASES

### Meeting Discussions

The NRC staff held a public meeting on February 10, 2005 with representatives from the ASME and the NEI to discuss technical issues related to risk-informed design and in-service inspection alternatives presented in ASME Code Cases N-660, N-720, N-716, and -711. The primary objectives of the meeting were:

- 1) To encourage open dialog early in the consensus standards development process to identify and resolve NRC exceptions in the regulatory endorsement process to facilitate stakeholder implementation once the code action is approved by the ASME, and
- 2) To discuss specific NRC staff comments on recent ASME Code Committee letter ballots on risk-informed code cases, with primary emphasis on ASME XI Code Case N-660-2.

The discussions focused on identifying those provisions in the ASME Code Cases which were subject to previous NRC staff comment, and not completely resolved by proposed ASME Code Committee revisions.

- (a) Code Case N-660-2, "Risk-Informed Safety Classification for Use in Risk-Informed Repair/Replacement Activities," ASME Section XI:

Discussions addressed NRC comments recorded on the ASME Letter Ballot Comment Form, dated December 7, 2004, pages 2-5 (see Attachment 5 of this meeting summary). The staff noted that this code case appears to be proceeding in a positive direction toward resolution, but requires some additional clarifications. Examples include, expansion of §-1330 to further define what constitutes PRA adequacy, and who makes that determination; clarification of terms such as indirect effects, spatial effects, large (piping) break, small (piping) break, low vs. moderate-energy system, etc.; clarification of the intent of the statement in I-3.2.2(b)(5). (See Attachment 3 of this meeting summary)

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- (b) Code Case N-660-1, "Risk-Informed Safety Classification for Use in Risk-Informed Repair/Replacement Activities," ASME Section XI:

Code Case N-660-1 differs from N-660-2 in that N-660-1 was developed for specific application to service water system repair/replacement activities. The staff commented that the current version of N-660-1 is not acceptable to the staff, and is further from successful resolution than N-660-2. The staff recommended that further efforts on N-660-1 be curtailed, and that ASME focus on N-660-2.

- (c) Code Case N-720, "Risk-Informed Safety Classification and Treatment for Design of Nuclear Facility Components," ASME Section III:

The ASME identified the need for further expansion of the scope of N-720 to accommodate advanced reactor design certification applications pursuant to 10 CFR Part 52. N-720 is currently written for light water cooled reactor designs, and must be revised to include other advanced reactor design concepts such as the high temperature gas cooled reactor. The staff suggested that consideration should also be given to the use of probability and risk assessment concepts as interactive design tools for advanced reactor design applications, and N-720 should be expanded to facilitate that potential usage. The staff referred to Commission paper SECY-05-0006, "Second Status Paper on the Staff's Proposed Regulatory Structure for New Plant Licensing and Update on Policy Issues Related to New Plant Licensing," as representing the current NRC thinking on the subject of advanced reactor design certification.

- (d) Code Case N-716, "Alternative Piping Classification and Examination Requirements Based Upon Risk-Informed and Safety Based Insights," ASME Section XI:

The staff suggested that clarification of N-716 is needed to define the basis upon which components are chosen for inclusion in a risk-informed inservice inspection (ISI) program. ASME responded that the choice of components for an alternative ISI program per N-716 is based on susceptibility of component degradation, and not solely on ease of accessibility. In this sense, the component selection process is no different than the selection criteria used in a traditional ISI program.

- (e) Code Case N-711, "Alternate Examination Coverage Requirements for Examination Category B-F, B-J, C-F-1, C-F-2 and R-A Piping Welds," ASME Section XI:

The staff commented that Code Case N-711 is not currently on a success path due to regulatory considerations. The staff concerns involve questions about applicability. The provisions of this code case would allow reduction of ASME Section XI required weld examination volume due to hardship considerations, such as inaccessibility, without providing for any compensatory inspections to maintain an equivalent level of quality and safety. The staff expressed preference for focusing the code case on more specifically defined applications (considering specific weld geometries which have resulted in repetitive

relief requests in the past), instead of a totally generic approach, which by-passes the 10 CFR 50.55 a relief request process. ASME responded that the current language presenting this issue may have given the staff a mis-leading perception of the intent of this code case. The description and presentation of the code case alternatives will be revisited for potential revision by the Code Committee working group during the forthcoming Code Committee meetings in March 2005.

The meeting discussions resulted in identification of actions to be taken by the ASME that will address many of the NRC staff concerns, especially regarding Code Case N-660-2 which is the highest priority among the risk-informed code cases, and the one that appears to be closest to successful completion. The participants agreed that these discussions will promote the continuing dialog necessary to increase the effectiveness of the codes and standards consensus process. A list of meeting attendees (Attachment 1), the slides presented by the ASME at the meeting (Attachment 2), and the code case documentation provided by the ASME in support of meeting discussions (Attachments 3 through 7) are attached.

Please direct any inquiries to Patrick Sekerak at 301-415-2623, or [pxs1@nrc.gov](mailto:pxs1@nrc.gov).

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- Attachments:
1. List of Attendees
  2. ASME Presentation Outline Slides
  3. ASME Section XI Code Case N-660-2
  4. ASME Section XI Code Case N-660-2 (with revisions identified)
  5. ASME Code Committee Letter Ballot Comments for Code Case N-660-2
  6. ASME Section III Code Case N-720
  7. Table: Comparison of Code Case N-660-2 and NEI 00-04 IDP considerations

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Memo w/Attachment 1 Accession No.:ML050560051

Attachment's 2 - 7 Accession No.: ML050530281

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**PUBLIC MEETING WITH THE ASME**  
**REGARDING RISK-INFORMED CODE CASES**

U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike, Room O-08B4  
Rockville, Maryland

February 10, 2005

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REGARDING RISK-INFORMED CODE CASES

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