

July 10, 2019

**Mr. Brian Thomas, Director  
Division of Engineering  
Office of Research  
Mail Stop T10-A36  
Nuclear Regulatory Commission  
Washington, DC 20555-0001**

**Subject: ASME Request for Including Specific Code Cases in Draft Revision 20 of Regulatory Guide 1.147, Draft Revision 39 of Regulatory Guide 1.84, and Draft Revision 7 of Regulatory Guide 1.193**

**References:** 1. ASME Code, Section XI, Division 1 Code Cases N-561-3, N-768, N-871, N-885, N-890, and N-892  
2. ASME Code, Section III, Division 1 Code Cases N-290-2, N-483-3, N-519-1, N-884, and N-891

Dear Sir:

As indicated in the NRC Report to the ASME Section XI Standards Committee on May 9, 2019, the NRC staff has initiated the review of the next draft regulatory guides that will address Code Cases published in Supplement 0 to the 2015 Edition through Supplement 7 of the 2017 Edition of the ASME Code. As such, draft revision 20 to Regulatory Guide 1.147, and draft revision 39 to Regulatory Guide 1.84 would not include the Code Cases referenced in this letter, most of which were recently published in Supplement 0 to the 2019 Edition.

Because ASME believes that the Code Cases referenced in this letter are of significant benefit to the industry, ASME encourages the NRC to include these cases in its review of the next draft revisions to the referenced regulatory guides, as recommended herein.

A brief explanation of these Code Cases is provided in Enclosure 1 to this letter to facilitate consideration of our request.

ASME would like to thank the NRC for considering this request to include the above Code Cases in the next draft revisions to the referenced regulatory guides. The industry will benefit from having these cases available for use at the earliest opportunity.

If you have any questions in regards to the contents of this letter, please direct them to Mr. Christian Sanna, Director, ASME Nuclear Codes & Standards by telephone (212) 591-8513 or by e-mail [SannaC@asme.org](mailto:SannaC@asme.org).

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Very truly yours,

A handwritten signature in black ink, appearing to read 'Richard Porco', written in a cursive style.

Richard Porco, Chair  
ASME Board on Nuclear Codes and Standards

Enclosures:

1. ASME Comments and Supporting Information

cc: Officers, ASME BPV Committee on Nuclear Inservice Inspection (XI)  
Officers, ASME BPV Committee on Construction of Nuclear Facility Components (III)

Enclosure 1  
ASME Comments and Supporting Information

1. ASME Code Case N-561-3, Alternative Requirements for Wall Thickness Restoration of Class 2 and High Energy Class 3 Carbon Steel Piping, Section XI, Division 1

This case provides alternative rules for repairing Class 2 and 3 piping, and is of particular value in repair of piping that cannot be isolated. This case has been revised to address all of the conditions that are currently imposed on the use of Code Case N-561-2 in Table 2 of Regulatory Guide 1.147, Revision 19.

*ASME requests that Code Case N-561-3 be included in draft Revision 20 to Regulatory Guide 1.147, provided that the inclusion of this case does not result in a delay in issuing the revised regulatory guide.*

2. ASME Code Case N-768, Alternative Volumetric Coverage Requirements for Ultrasonic Examination of Class 1 and 2 Pressure Vessel Weld Joints Greater Than 2 in. (50 mm) in Thickness, Section XI, Division 1

This case provides alternative requirements for volumetric examination of vessel welds when essentially 100% of the required examination volume cannot be achieved because of permanent interferences or component geometry. Use of this case should help minimize the need for licensee relief requests for welds where the examination volume is limited.

*ASME requests that Code Case N-768 be included in draft Revision 20 to Regulatory Guide 1.147, even if the inclusion of this case could result in a delay in issuing the revised regulatory guide.*

3. ASME Code Case N-871, Repair of Buried Class 2 and 3 Piping Using Carbon Fiber-Reinforced Polymer Composite, Section XI, Division 1

This case provides alternative repair techniques using carbon fiber reinforced polymer composite materials on interior surfaces of buried Class 2 and 3 piping. ASME believes that use of this case will help licensees avoid having to perform potentially significant work associated with excavating buried piping for other types of repair/replacement activities.

*ASME requests that Code Case N-871 be included in draft Revision 20 to Regulatory Guide 1.147, provided that the inclusion of this case does not result in a delay in issuing the revised regulatory guide.*

4. ASME Code Case N-885, Alternative Requirements for Table IWB-2500-1, Examination Category B-N-1, Interior of Reactor Vessel; B-N-2, Welded Core Support Structures and Interior Attachments to Reactor Vessels; B-N-3, Removable Core Support Structures, Section XI, Division 1

This case provides an alternative to the requirements of Table IWB-2500-1, Examination Categories B-N-1, B-N-2, and B-N-3, consolidating these requirements into a single Code Category B-N. This case also eliminates requirements for visual examination of reactor vessel interior surfaces currently specified in Category B-N-1. During normal refueling outages, only a limited portion of the reactor vessel interior surfaces are accessible for

B-N-1 examination, and ASME believes that these examinations were providing little or no benefit.

*ASME requests that Code Case N-885 be included in draft Revision 20 to Regulatory Guide 1.147, provided that the inclusion of this case does not result in a delay in issuing the revised regulatory guide.*

5. ASME Code Case N-890, Materials Exempted From G-2100(b) Requirement, Section XI, Division 1

This case provides an alternative to the requirement of Section XI, Appendix G, G-2110(b) to obtain "fracture toughness data for at least three heats" for specific materials with minimum specified yield strength at room temperature between 50 ksi and 90 ksi. The proposed change aligns Appendix G with revisions to IWB-3510 that have been previously approved by Section XI.

*ASME requests that Code Case N-890 be included in draft Revision 20 to Regulatory Guide 1.147, even if the inclusion of this case could result in a delay in issuing the revised regulatory guide.*

6. ASME Code Case N-892, Alternative Requirement for Form OAR-1, Owner's Activity Report, Completion Time, Section XI, Division 1

This case provides alternative administrative requirements that will allow licensees to submit the Owner's Activity Report, Form OAR-1 to the regulatory and enforcement authorities having jurisdiction at the plant site within 120 calendar days of the completion of each refueling outage, in lieu of 90 days currently required by Section XI. This will allow additional time for Owners to complete administrative duties associated with compiling information and submitting this report.

*ASME requests that Code Case N-892 be included in draft Revision 20 to Regulatory Guide 1.147, even if the inclusion of this case could result in a delay in issuing the revised regulatory guide.*

7. ASME Code Case N-290-2, Expansion Joints in Class 1, Liquid Metal Piping, Section III, Division 1

This case provides alternative requirements for bellows expansion joints in Class 1 applications. Alternative rules are provided for bellows in liquid metal service for Class 1 applications.

*ASME requests that Code Case N-290-2 be included in draft Revision 39 to Regulatory Guide 1.84, provided that the inclusion of this case does not result in a delay in issuing the revised regulatory guide.*

8. ASME Code Case N-483-3, Alternative Rules to the Provisions of NCA-3800, Requirements for Purchase of Material, Section III, Division 1

ASME Code Case N-483-3 has been annulled. This Case is currently listed in Regulatory Guide 1.193, Revision 5, Table 1, Unacceptable Section III Code Cases.

*ASME requests that R.G. 1.193 be revised to indicate that Code Case N-483-3 has been annulled.*

9. ASME Code Case N-519-1, Use of 6061-T6 and 6061-T651 Aluminum for Class 1 Nuclear Components, Section III, Division 1

This case provides requirements for the use of 6061-T6 and 6061-T651 Aluminum for Class 1 Nuclear Components Section III, Division 1. Code Case N-519 is currently not approved for use, per Regulatory Guide 1.193, Revision 5 because this case was applicable to only one DOE aluminum vessel. Regulatory Guide 1.193 also indicates that Code Case N-519 was annulled 2/3/03.

*ASME requests that Code Case N-519-1, which has been reinstated by ASME, be included in draft Revision 39 to Regulatory Guide 1.184, provided that the inclusion of this case does not result in a delay in issuing the revised regulatory guide.*

10. ASME Code Case N-884, Procedure to Determine Strain Rate for Use With the Environmental Fatigue Design Curve Method and the Environmental Fatigue Correction Factor,  $F_{en}$ , Method as Part of an Environmental Fatigue Evaluation for Components Analyzed per the NB-3200 Rules, Section III, Division 1

This case provides important methodology for the determination of strain rate. The strain rate is a key consideration in the evaluation of environmentally assisted fatigue when using the environmental fatigue correction factor,  $F_{en}$ , method.

*ASME requests that Code Case N-884 be included in draft Revision 39 to Regulatory Guide 1.184, provided that the inclusion of this case does not result in a delay in issuing the revised regulatory guide.*

11. ASME Code Case N-891, Alternative Requirements to Appendix XXVI, XXVI-2400, XXVI-4130, and XXVI-4131 for Inspection and Repair of Indentations for Polyethylene Pipe and Piping Components, Section III, Division 1

This case provides important alternative repair requirements for the inspection and repair of indentations for polyethylene pipe and piping components. Specifically, the case provides specified allowable scratch depths based on pipe diameter and wall thickness (DR).

*ASME requests that Code Case N-891 be included in draft Revision 39 to Regulatory Guide 1.184, provided that the inclusion of this case does not result in a delay in issuing the revised regulatory guide.*