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U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: ASME Comments on Draft NRC Regulatory Issue Summary 2014-XX: Applicability of ASME Code Case N-770-1 as Conditioned in 10 CFR 50.55a, "Codes and Standards," to Branch Connection Butt Welds

References:

1. Federal Register Notice NRC-2014-0232
2. Letter from Patrick L. Hiland (NRC) to Kevin Ennis (ASME), dated June 23, 2014

Dear Sir or Madam:

ASME is pleased to provide comments on the NRC Draft Regulatory Issue Summary (RIS) regarding applicability of ASME Code Case N-770-1 to branch connection welds. Enclosed are ASME's comments for consideration by the NRC.

If you have any questions, please contact me or direct them to Mr. Kevin Ennis, ASME Director, Nuclear Codes and Standards by telephone at (212) 591-7075 or by e-mail (ennisk@asme.org) and thank you for consideration of our comments regarding this draft regulatory issue summary.

Very Truly Yours,

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ASME Comments on Draft Regulatory Issue Summary 2014-XX on Applicability of ASME Code Case N-770-1 to Branch Connection Butt Welds

1. In the Background Information on page 1 of the draft RIS, the NRC states that "Inspection of all Class 1 piping and nozzle dissimilar metal butt welds is mandated in 10 CFR 50.55a(g)(6)(ii)(F)." A similar statement is made in the third paragraph on page 3 of the draft RIS.

   ASME Comments:

   a. *ASME Code Case N-770-1, paragraph -1000(a) specifies that this case applies only to volumetric and surface examination of NPS 2 (DN 50) and greater piping and nozzles and to visual examination of NPS 1 (DN 25) and greater pressure retaining Class 1 PWR piping and vessel nozzle butt welds fabricated with Alloy 82/182 materials, with or without application of mitigation activities. Exceptions to these requirements are specified in -1000(c) through -1000(f) of this case.*

   b. *10 CFR 50.55a(g)(6)(ii)(F) does not impose a condition on the use of ASME Code Case N-770-1 that would require application of this case to components of a size smaller than that prescribed in -1000(a).*

   ASME Recommendations:

   In light of the above information, ASME recommends that the NRC revise the Background Information in this RIS to clarify that Code Case N-770-1 does not apply to "all Class 1 piping and nozzle dissimilar metal butt welds" and that it applies only to volumetric and surface examination of NPS 2 (DN 50) and greater piping and nozzles and to visual examination of NPS 1 (DN 25) and greater pressure retaining Class 1 PWR piping and vessel nozzle butt welds fabricated with Alloy 82/182 materials, except as specified in -1000(c) through -1000(f) of this case.

   The NRC should consider whether the Intent paragraph on page 1 of the draft RIS should be clarified as the opinion of the NRC, as ASME does not believe that Alloy 82/182 dissimilar metal full penetration branch connection welds are required to be classified as butt welds for application of Code Case N-770-1.

2. In the Background Information on page 2 of the draft RIS, the NRC states that "10 CFR 50.55a(g)(6)(ii)(F) and Code Case N-770-1 pertain to butt welds, irrespective of whether the butt weld is circumferential or a branch connection." In addition, this paragraph also references ASME Section III provisions related to the design and construction of branch connection full penetrations nozzles.

   ASME Comments/Recommendations:

   a. *Although the NRC has the authority to interpret requirements of 10 CFR 50.55a(g)(6)(ii)(F), only ASME has the authority to interpret its Codes and Standards (Including Code Cases). This position is supported by the NRC in its Inspection Manual, Part 9900, in which the NRC "acknowledges that ASME is the official interpreter of the Code...". The above statement in the draft RIS is in conflict with a recent ASME interpretation that cases N-770-1, N-770-2, and N-770-3 do not apply to branch connection butt welds. This interpretation is documented in ASME Record #14-382, but has not yet been published.*

      ASME recommends that the above statement in the draft RIS be revised to delete reference to Code Case N-770-1 and indicate that the NRC intended that all such full penetration welds be examined, regardless of configuration.

b. *ASME understands that many plants were designed to Construction Code requirements other than Section III. In addition, when applying the rules of Section XI, Figures IWB-2500-9, -10, and -11 are used to define examination boundaries for full penetration branch connection welds examined in accordance with Category B-J.*

   Because many plants were designed and constructed to requirements other than Section III, ASME recommends that the NRC clarify that information describing Section III design and construction requirements is only applicable when Section XI specifically references these construction code requirements.

3. In the Summary of Issue paragraph on page 2 of the draft RIS, the NRC appears to be making the case that the criteria in the ASME Code, Section III, Figure NB-4244(a)-1 should be used to classify whether a branch connection weld is a full penetration butt weld.

   ASME Comments/Recommendations:

   a. *As mentioned in the previous comment, not all plants were designed and constructed to ASME Section III rules, so it would seem inappropriate to cite Section III figures that should be used by all licensees to classify these welds. When applying Section XI rules, Figures IWB-2500-9, -10, and -11 are required to be used for examination of full penetration branch connection welds.*

   ASME recommends that the RIS be revised to reference Section XI, Figures IWB-2500-9, -10, and -11 for in-service inspection in place of Section III, Figure NB-4244(a)-1.

4. In paragraph 3 on page 3 of the draft RIS, the NRC indicates that "...ASME intended that the subject welds [full penetration branch connection welds] be inspected under Code Case N-770-1."

   ASME Comments/Recommendations:

   a. *This statement implies that, by removing hot leg and cold leg full penetration Alloy 82/182 welds from Code Case N-722-1, it was the "intent" of ASME that such welds would require examination in accordance with Code Case N-770-1. Only ASME has the authority to interpret its intent relative to ASME Codes and Standards (including Code Cases), and the ASME interpretation approved under ASME Record #14-382 conflicts with this opinion by clarifying that ASME did not intend for Alloy 82/182 full penetration branch connection welds to be examined in accordance with N-770-1. ASME recognizes that removal of these welds from the scope of Code Case N-722-1 may have been inappropriate, and ASME is taking action to investigate and correct this oversight, as appropriate. When Code Case N-722-1 was revised to eliminate these welds from the scope of the case, ASME was unaware that certain plants (i.e., Palisades) had these types of welds in their Class 1 systems. Furthermore, it is ASME's position that none of the figures in Code Case N-770-1 include configurations that are applicable to branch connections, supporting ASME's position documented in the referenced interpretation.*

   ASME recommends that the NRC clarify that the above statement in the RIS represents only the opinion of the NRC. Also, reference to "...all Class 1 piping and nozzle dissimilar metal butt welds, ..." should be revised to address the scope of welds covered by 10

CFR 50.55a(g)(6)(ii)(F), as addressed in our comment on the Background Information.

5. In paragraph 4 on page 3 of the draft RIS, the NRC indicates that "In accordance with 10 CFR 50.55a(g)(6)(ii)(F) and Code Case N-770-1, the NRC requires all butt welds using Alloy 82/182 material that are NPS 2 or greater, including branch connection butt welds, to be volumetrically inspected."

   a. *Code Case N-770-1 does not require that "all butt welds using Alloy 82/182 material that are NPS 2 or greater, including branch connection butt welds, to be volumetrically inspected". Welds identified in -1000(c) through -1000(f) of this case are not required to be examined.*

      ASME recommends that this statement be revised to clarify the scope of welds required by 10 CFR 50.55a(g)(6)(ii)(F) to be examined.

   b. *ASME has indicated that branch connection welds are not included in N-770-1, as documented in the interpretation issued under ASME Record #14-382.*

      ASME recommends that the above statement in the draft RIS be revised to delete reference to Code Case N-770-1. Further, it is recommended that NRC clarify their use of the term, "branch connection butt welds". Specifically, the NRC should clarify whether the term "branch connection butt welds" in the draft RIS is intended to include both full penetration branch connections and butt welded branch connections.

   c. *ASME recognizes that the diameter of full penetration branch connection welds may be considerably larger than the size of the branch piping. As such, it may be unclear how to determine whether a branch connection weld requires examination in accordance with the guidance proposed in this RIS.*

      When applying requirements of Section XI, Table IWB-2500-1, Category B-J, Item No. B9.30, it is ASME's position that the branch piping size (for application of B9.30 requirements) is based on the nominal diameter of the connected branch piping.

      ASME recommends that the NRC provide further clarification on how licensees are to determine the size of branch connection welds that would be subject to examination under the guidance in this RIS. ASME cannot provide this clarification because it is ASME position that these welds are not included in the scope of Code Case N-770-1.

6. General Recommendation

   ASME recognizes that only the NRC is authorized to interpret 10 CFR 50.55a(g)(6)(ii)(F). Because the NRC's position on the application of Code Case N-770-1 to full penetration branch connection welds conflicts with the ASME interpretation issued under ASME Record #14-382, ASME recommends that the NRC consider taking action to revise conditions in 10 CFR 50.55a(g)(6)(ii)(F) to require examination of full penetration branch connection welds using Alloy 82/182 material, if this action is deemed warranted.

   ASME believes that clarifying the NRC's position only in this RIS is not appropriate, in light of the ASME Interpretation issued under ASME Record #14-382, and that the NRC should clarify their position on this matter by revising 10 CFR 50.55a(g)(6)(ii)(F).