KHNPDCDRAIsPEm Resource

From: Ciocco, Jeff
Sent: Monday, June 15, 2015 8:59 AM
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Cc: Huang, Jason; Clark, Theresa; Betancourt, Luis; Ward, William; Lee, Samuel
Subject: APR1400 Design Certification Application RAI 26-7948 (05.02.01.02 - Applicable Code Cases)
Attachments: APR1400 DC RAI 26 MEB 7948.pdf; image001.jpg

KHNP

The attachment contains the subject request for additional information (RAI). This RAI was sent to you in draft form. Your licensing review schedule assumes technically correct and complete responses within 30 days of receipt of RAIs.

Please submit your RAI response to the NRC Document Control Desk.

Thank you,

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Hearing Identifier: KHNP_APR1400_DCD_RAI_Public
Email Number: 31

Mail Envelope Properties (A67A2D233B3FBB4C8B5109AD7C39550715C4CCCF76)

Subject: APR1400 Design Certification Application RAI 26-7948 (05.02.01.02 - Applicable Code Cases)
Sent Date: 6/15/2015 8:59:06 AM
Received Date: 6/15/2015 8:59:07 AM
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Files	**Size**	**Date & Time**
MESSAGE	519	6/15/2015 8:59:07 AM
APR1400 DC RAI 26 MEB 7948.pdf	108326	
image001.jpg	5020	

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Priority: Standard
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REQUEST FOR ADDITIONAL INFORMATION 26-7948

Issue Date: 06/15/2015
Application Title: APR1400 Design Certification Review – 52-046
Operating Company: Korea Hydro & Nuclear Power Co. Ltd.
Docket No. 52-046
Review Section: 05.02.01.02 - Applicable Code Cases
Application Section:

QUESTIONS

05.02.01.02-1

SRP Section 5.2.1.2 cites Regulatory Guides (RGs) 1.84, 1.147, and 1.192 to provide a list of acceptable Code Cases related to ASME Boiler and Pressure Vessel Code (BPV Code) Section III, Division 1 on component design and materials; BPV Code Section XI, Division 1 on tests and inspections; and Operations and Maintenance of Nuclear Power Plants (OM Code) on operation and maintenance of nuclear power plant components. According to the SRP, the NRC staff reviews the table provided by the applicant to confirm that the Code Cases listed conform to the list of acceptable Code Cases in these RGs. In performing this review, the NRC staff has found several instances where the relevant table (Tier 2, Table 5.2-4) is incomplete or inconsistent with other DCD text. Therefore, additional information is needed to enable the staff to make a finding on compliance with General Design Criterion 1 and 10 CFR 50.55a, which incorporates these regulatory guides by reference.

Several examples are as follows:

- In DCD Tier 2, Section 3.12.2.2, Code Case N-122-2 is mentioned as being used for piping systems and pipe supports; however, this Code Case is not mentioned in DCD Tier 2, Table 5.2-4, "ASME Section III Code Cases."
- DCD Tier 2, Section 3.13 also states that ASME Section III Class 1, 2, and 3 component fasteners are fabricated using materials prescribed in ASME Code Cases allowed by RG 1.84, but does not mention any specific ASME Code Cases.
- In DCD Tier 2, Section 3.9.3.4, it states that ASME Section III Class 1, 2, and 3 component supports are designed and constructed in accordance with ASME Section III and ASME Code Case(s), but this section does not reference any specific ASME Code Cases. DCD Tier 2, Sections 6.0 and 5.4.2.1.1 also have the same issue.
- DCD Sections 6.6.3 and 6.6.1 discuss ASME Code Cases used in accordance with RG 1.147. However, no Code Cases in RG 1.147 are mentioned in DCD Section 5.2.1.2.
- In the DCD markups enclosed with the applicant's letter MKD/NW-15-0020L dated June 1, 2015, ASME Code Cases OMN-1, 3, and 11 are mentioned in Insert C of MEB AI 3-11,12,13 (14/26) for DCD Tier 2, Section 3.9.6.3.1. However, this letter did not include associated markups to DCD Tier 2, Section 5.2.1.2.

The staff requests the applicant to update Table 5.2-4 to be comprehensive in including all ASME Code Cases referenced to support the design certification application, and to clarify in the application which specific ASME Code Cases are used when mentioned. Combined license (COL) items 5.2(1), 5.2(2), and 5.2(3) should also be revised to clarify that they address the scope outside the design certification application (e.g., developing and executing an operational program such as inservice testing).

05.02.01.02-2

Table 5.2-4 lists certain Code Cases that have been conditionally accepted by the NRC staff in RG 1.84, but does not explicitly state that the Code Cases will be used with the conditions as mentioned in RG 1.84, Table 2, "Conditionally Acceptable Section III Code Cases." The staff requests the applicant to clarify in the DCD that the conditions as stated in RG 1.84 will be used for the conditionally accepted Code Cases in Table 5.2-4, such that the NRC staff can make a finding on compliance with 10 CFR 50.55a, which incorporates these regulatory guides by reference. Additional information should be provided in the RAI response to describe how the Code Cases are implemented in accordance with these conditions. For example N-71-18 Condition 4 states that Paragraph 15.2.2 is not acceptable as written and must be replaced with the following: "When not exempted by 15.2.1 above, the postweld heat treatment must be performed in accordance with NF-4622 except that ASTM A-710 Grade A Material must be at least 1000°F (540°C) and must not exceed 1150°F (620°C) for Class 1 and Class 2 material and 1175°F (640°C) for Class 3 material."


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