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PWROG-18034-P/NP, Revision 0
Project Number 99902037

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Subject: PWR Owners Group
Transmittal of a Revision to the Markup of PWROG-18034-P and PWROG-18034-NP Associated with the Response to Request for Additional Information Number 2, Part 2, PA-MS-1519

References:

1. Letter OG-18-226, Transmittal of PWROG-18034-P and PWROG-18034-NP, Revision 0, "Updates to the Methodology in WCAP-15029-P-A, Rev. 1, 'Westinghouse Methodology for Evaluating the Acceptability of Baffle-Former-Barrel Bolting Distributions Under Faulted Load Conditions'", PA-MS-1519, dated October 31, 2018
2. NRC Letter of Acceptance for Review of PWROG-18034-P and PWROG-18034-NP, Revision 0, "Updates to the Methodology in WCAP-15029-P-A, Rev. 1, 'Westinghouse Methodology for Evaluating the Acceptability of Baffle-Former-Barrel Bolting Distributions Under Faulted Load Conditions'", dated March 26, 2019
3. Email from the NRC (Drake) to the PWROG (Holderbaum), Request for Additional Information, RAIs 1-7, RE: PWROG-18034-P (NP), Revision 0, "Updates to the Methodology in WCAP-15029-P-A, Rev. 1, 'Westinghouse Methodology for Evaluating the Acceptability of Baffle-Former-Barrel Bolting Distributions Under Faulted Load Conditions'", dated April 9, 2019
4. Letter OG-19-236, Transmittal of the Response to Request for Additional Information, RAIs 1-7 Associated with PWROG-18034-P/NP, Revision 0, "Updates to the Methodology in WCAP-15029-P-A, Rev. 1, 'Westinghouse Methodology for Evaluating the Acceptability of Baffle-Former-Barrel Bolting Distributions Under Faulted Load Conditions'", PA-MS-1519, dated October 22, 2019

The responses to the NRC Request for Additional Information (RAIs) in Reference 3 were transmitted via Reference 4. Attachment 1 in Enclosures 1 and 2 of Reference 4 contained the RAI responses. Attachment 2 in Enclosures 1 and 2 of Reference 4 contained markups of revisions to PWROG-18034 associated with the RAI responses. The markup of PWROG-18034 on page 12

of 13 in Attachment 2 in Enclosures 1 and 2 of Reference 4 did not completely reflect the response to RAI Number 2, Part 2.

The purpose of this letter is to transmit a revision to the markup on page 12 of 13 in Attachment 2 in Enclosures 1 and 2 of Reference 4 so that it is consistent with the response to RAI Number 2, Part 2 in Attachment 1 in Enclosures 1 and 2 of Reference 4. This revision will be contained in the NRC approved version of PWROG-18034 that will be prepared after the NRC Final Safety Evaluation is received.

The response to RAI Number 2, Part 2 contained in Attachment 1 in Enclosures 1 and 2 of Reference 4 includes a discussion of additional conservatisms that will be included when applying the methodology in PWROG-18034 to evaluate reduced patterns of barrel-former bolts. The following discussion is included on page 6 of 20 in Attachment 1 in Enclosures 1 and 2 of Reference 4:

“The use of irradiated material properties with regard to the evaluation of reduced patterns of barrel-former bolts will also result in a revision to the TR. Note that barrel-former bolts are located at a sufficient distance from the reactor core such that saturated irradiated properties as shown in RAI Table 2 will not be achieved through 60-years of plant operation. The plant-specific dose, in conjunction with the unirradiated limits as discussed in Option 1 will be used. This is conservative, since the use of an irradiated material model for the bolts based upon plant-specific irradiation will produce higher stress results relative to an unirradiated material model, which are then compared to the lower stress limits for unirradiated materials. The use of unirradiated limits to evaluate reduced patterns of barrel-former bolts is reflected in the redline markup of PWROG-18034-P on page 12 of Attachment 2.”

As discussed in the RAI response above, the intent is to use a material model for the barrel-former bolts that accounts for the plant-specific dose, with the unirradiated material limits. However, the only discussion contained in the redline markup of PWROG-18034 on page 12 of 13 in Attachment 2 in Enclosures 1 and 2 of References 4 is to apply the unirradiated allowable limits as stated below:

“When evaluating reduced patterns of barrel-former bolts, for doses of less than 10 dpa, the limits defined in Option 1 will be conservatively applied.”

Therefore, the additional condition discussed in the RAI response, i.e., to apply a material model for the barrel-former bolts based upon the plant-specific dose, should also be reflected in the markup of PWROG-18034. The markup of the PWROG-18034 on page 12 of 13 in Attachment 2 in Enclosures 1 and 2 of References 4 will be revised as follows:

“When evaluating reduced patterns of barrel-former bolts, for doses of less than 10 dpa, the material model used for the barrel-former bolts will account for the plant-specific dose and conservatively apply the unirradiated limits defined in Option 1.”

This revision to the markup of PWROG-18034 on page 12 of 13 in Attachment 2 in Enclosures 1 and 2 of Reference 4 makes it consistent with the response to RAI Number 2, Part 2 by applying a material model for the barrel-former bolts based upon the plant-specific dose.

Enclosures 1 and 2 contain the revised markup of page 12 of 13 in Attachment 2 in Enclosures 1 and 2 of Reference 4 for PWROG-18034-P and PWROG-18034-NP, respectively.

Correspondence related to this transmittal should be addressed to:

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If you have any questions, please do not hesitate to contact me at (805) 545-4328 or Mr. W. Anthony Nowinowski, Program Manager of the PWR Owners Group, Program Management Office at (412) 374-6855.

Sincerely yours,



Ken Schrader, COO & Chairman
PWR Owners Group

JKS:am

cc: PWROG Materials Committee (Participants of PA-MSC-1519)
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Enclosures (2): Revised markup page of PWROG-18034-P and PWROG-18034-NP