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May 26, 1994

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Response to April 5, 1994 NRC Letter Concerning Generic Letter
92-01, Revision 1, "Reactor Vessel Structural Integrity" (TAC No. M83485)

As requested by your letter of April 5, 1994, we are hereby providing additional information to address the remaining open issue for Monticello concerning Generic Letter 92-01, "Reactor Vessel Structural Integrity". The specific information you requested is provided in Attachment 1.

Also included in Attachment 1 is additional information to support the value to be used for the copper content for alloy welding rods used in the fabrication of the beltline region welds for the Monticello reactor vessel. This additional information was verbally requested by the NRR staff during a conference call with NSP personnel on May 9, 1994. During a follow-up call between Terry Coss (NSP) and Beth Wetzel (NRC-NRR) on May 13, 1994, it was agreed that NSP's response to the NRC's April 5, 1994 letter could be submitted after the initial due date to allow NSP the time to gather the new information requested by the NRC on May 9, 1994. This would enable NSP to respond to all outstanding information requests on this issue in a single submittal and minimize the need for additional correspondence.

This letter contains the following new NRC commitment:

1. We are participating in the BWR Owners Group effort to address the initial RT_{NDT} issue and commit to using this effort as the means to resolve this issue for Monticello.

Please contact Terry Coss, Sr Licensing Engineer, at (612) 295-1449 if you require additional information.

R. O. Anderson for ROA

Roger O Anderson
Director
Licensing and Management Issues

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NORTHERN STATES POWER COMPANY

cc: Regional Administrator-III, NRC
NRR Project Manager, NRC
Resident Inspector, NRC
State of Minnesota,
Attn: Kris Sanda
J Silberg

Attachment 1: Monticello Response to NRC Questions Concerning GL 92-01

Attachment 1

Monticello Response to NRC Questions Concerning GL 92-01

Our responses to the specific questions and requests contained in your letter of April 5, 1994 are as follows:

NRC Request:

"The initial RT_{NDT} values determined by General Electric's (GE) initial methodology have not been validated and the BWR Owners Group report, GE-NE-523-109-0893, entitled, "Basis for GE RT_{NDT} Estimation Method", did not resolve this issue. GE is in the process of validating its methodology for resolving the initial RT_{NDT} determination issue and will document the results in a topical report. The BWR Owners Group is obtaining approval from its members to provide the GE topical report to the NRC staff for its review and approval. We request that you submit within 30 days a Commitment to the BWR Owners Group effort or a schedule for a plant specific analysis to resolve this issue."

Monticello Response:

We are participating in the BWR Owners Group effort described above and agree to commit to using this effort as the means to resolve the initial RT_{NDT} determination issue for Monticello.

NRC Request:

"Further, we request that you provide confirmation of the plant-specific applicability of the topical report, NEDO-32205, Revision 1, (as specified in Appendix B of that report) and submit a request for approval of the topical report as the basis for demonstrating compliance with 10 CFR Part 50, Appendix G, Paragraph IV.A.1."

Monticello Response:

We hereby confirm that NEDO-32205, Revision 1, is applicable to Monticello. Please note that Plant Applicability Verification Forms supporting the determination that Monticello meets the plant specific applicability of Appendix B of the report were previously provided to the NRC staff as an attachment to our August 27, 1993 submittal on this topic. Although the forms were from the original version of the topical report, the only relevant change occurring in Revision 1 of the report involved a slight (1%) increase in the "R.G. 1.99 Predicted % Decrease" allowed for weld material. The Monticello data met the original NEDO-32205 criteria ($\leq 33\%$), thus it meets the new Revision 1 criteria ($\leq 34\%$) by inspection.

Also, we hereby request that the approved topical report be used as the basis for demonstrating compliance with 10 CFR Part 50, Appendix G, Paragraph IV.A.1.

NRC Request:

"We further request that you verify that the information you have provided for your facility has been accurately entered in the data base."

Monticello Response:

We have reviewed Enclosures 1 and 2 of your April 5, 1994 letter and have confirmed that the information previously provided by NSP is accurately presented.

In addition to the above, a conference call between NSP and NRC-NRR staff personnel was held on May 5, 1994 to discuss an additional question from the staff that was not included in the NRC's April 5, 1994 letter to NSP. The question revolved around information provided to the NRC by NSP in a previous letter on this topic submitted on August 27, 1993. In that letter, NSP reported that the material records for the specific weld rods used in the making of the reactor vessel beltline welds did not provide information concerning copper content. For this reason, a value of 0.1% copper content was conservatively assumed based on prior NRC correspondence. During the May 5, 1994 call, the NRC staff indicated that while the 0.1% copper content value was not unreasonable, NSP should attempt to provide additional information to substantiate this value.

In response to that request, NSP contacted the weld rod manufacturer to determine what type of supporting information might be available. Although unable to provide the copper contents for the specific heats and lots of weld rod used at Monticello, the manufacturer was able to provide information on the copper content of 29 other heats and lots of the same type of weld wire (8018NM) manufactured during the same time frame (1968 thru 1971) as the Monticello weld wire. Both NSP and the weld wire manufacturer are confident that the copper content of these 29 other heats and lots is representative of the weld rod used to construct the Monticello reactor vessel, since the rod type (8018NM) was a widely used standard alloy rod with an established chemistry. There were no changes in the manufacturing process during that time frame that would cause anything other than statistical variations in copper content.

We have performed a statistical analysis of the copper content information provided by the manufacturer for the 29 representative heats and lots and have determined the following:

1. The maximum copper content of any heat or lot was 0.04%.
2. The minimum copper content of any heat or lot was 0.01%.
3. The mean value of the copper content for the 29 heats and lots was 0.027%.
4. The standard deviation of the copper content for the 29 heats and lots was 0.006%.

Based on the above information, we have concluded that using a copper content of 0.1% for the weld rod used in the Monticello beltline welds is unnecessarily conservative and restrictive. Instead, we will assume a value of the sample mean plus one standard deviation ($0.027\% + 0.006\% = 0.033\%$), consistent with NRC guidance on this issue.