Xcel Energy®

Monticello Nuclear Generating Plant
2807 W County Road 75
Monticello, MN 55362

July 17, 2013

L-MT-13-060
10 CFR 50.55a(g)

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Monticello Nuclear Generating Plant
Docket 50-263
Renewed Facility Operating License No. DPR-22

Response to Request for Additional Information Regarding Fifth 10-Year Inservice Inspection Program Plan Review (TAC ME8186)

References: 1) Letter from Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy to Document Control Desk, "Fifth Ten-Year Inservice Inspection Plan", dated February 28, 2012 (ADAMS Accession No. ML12060A298).

2) NRC Draft Request for Additional Information Regarding Review of the Fifth10-Year Inservice Inspection Program Plan (TAC ME8186), dated April 9, 2013 (ADAMS Accession No. ML13099A275).

3) NRC Request for Additional Information Regarding Review of the Fifth10-Year Inservice Inspection Program Plan (TAC ME8186), dated May 16, 2013 (ADAMS Accession No. ML13171A278).

Pursuant to 10 CFR 50.55a(g)(5)(i), Northern States Power Company, a Minnesota corporation, d/b/a Xcel Energy, the licensee for the Monticello Nuclear Generating Plant, submitted its fifth ten-year interval Inservice Inspection (ISI) Program Plan (Reference 1).

Subsequently, the U. S. Nuclear Regulatory Commission (NRC) issued a Draft Request for Additional Information (RAI) Regarding Review of the Fifth10-Year Inservice Inspection Program Plan (Reference 2). At the conclusion of a May 9, 2013 teleconference among NSPM, the NRC and its contractors, it was determined that draft RAI Question 1 was no longer required and RAI Question 4 (a comment) was understood and removed. Draft RAI Questions 2 and 3 were formally issued (Reference 3).

The NSPM response to the NRC RAI is provided in the Enclosure.

Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

Should you have questions regarding this letter, please contact Mr. Randy Rippy at (612) 330-6911.

Mark A. Schimmel
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company – Minnesota

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC

ENCLOSURE

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
FIFTH TEN-YEAR INSERVICE INSPECTION PLAN
DATED MAY 16, 2013

RAI-1: Exempt Components

RAI-1:
In Section 3.0 and Appendix D of the submittal, the licensee stated that examinations of Class 1, 2, 3 components, including welded attachments and supports, are based on the requirements as defined in ASME Code, Section XI, Sections IWB-, IWC-, IWD-, and IWF-2000. The Bottom Head Drain Nozzle listed under ASME Code Category B-D is exempt per ASME Code, Section XI, Paragraph IWB-1220(c).

Please verify there are not any other components being examined that fall under the provisions of ASME Code, Section XI, Paragraphs IWB-, IWC-, and IWD-1220, "Components Exempt from Examination," and IWF-1230, "Supports Exempt from Examination."

Response to RAI-1:

As noted, the Bottom Head Drain Nozzle is identified as exempt, and is therefore not subject to examination under IWB-1220(c) and has no scheduled exams. It was included in Appendix D as an anecdotal notation and, as seen by the Category Total of 58, it was not included in the total number of components subject to examination.

Review has determined that there are no components being examined under ASME Section XI provisions that are exempted by paragraphs IWB-, IWC-, IWD-1220 or IWF-1230.

RAI-2: Appendix D, Inspection Plan and Schedule Tables

RAI-2.1:

Category B-A, Item B1.11, Reactor Vessel circumferential shell welds - ASME Code Table IWB-2500-1, Category B-A, Item B1.11, states that all welds should be inspected. Request for Alternative, RR-001, requires that all welds be examined at a reduced percentage of 2 to 3 percent associated with the intersection with longitudinal welds. The licensee has listed only one out of four circumferential shell welds that are to be inspected for the fifth ten-year inservice inspection program plan.

Please explain the basis for examining only one of the four circumferential-to-axial intersecting areas for all RPV shell welds at MNGP.

Response to RAI-2.1:

NSPM would like to clarify that all four circumferential welds will be examined.[1]

Per footnote 1 of Appendix D, Category B-A, Item B1.11, approximately 2 to 3 percent of each circumferential weld shall be examined. The footnote goes on to say that welds VCBA-2, VCBB-3, and VCBB-4 will be examined with the longitudinal welds at the intersection point. VCBB-1 will be examined through the Nozzle Window N1A.

As described in the alternative[1], weld VCBB-1 necessitates examination independent of the longitudinal seam. To ensure compliance with the alternative, this independently scheduled weld is the 1 of 4 (25%) depicted in Appendix D, Category B-A, Item B1.11.

The remaining 3 of 4 (75%) circumferential welds, VCBA-2, VCBB-3, and VCBB-4, do not require independent scheduling as they will be examined during examinations of the associated longitudinal seam welds to comply with the approved alternative.

Longitudinal welds (B1.12) are scheduled as shown in Appendix D, (8 of 8, 100%) and are scheduled at the end of the 10-year Interval, which, as noted above, includes the applicable circumferential weld intersection.

Scheduling and performing exams as described in Appendix D will ensure compliance with the approved alternative for Category B-A Item B1.11.

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1 NRC letter to NSPM, "Monticello Nuclear Generation Plant (MNGP) - Request For Relief No. 17 Regarding Examination of Reactor Pressure Vessel Shell Circumferential Welds" (TAC No. ME3526), ADAMS Accession Number ML110200700.

RAI-2.2:

Category B-K, Item B10.10, Pressure Vessel Welded Attachments - According to ASME Code Table IWB-2500-1, it is not permissible to defer examinations to the end of the interval. The examination of a larger component, such as the reactor vessel support skirt, should be performed in segments throughout the entire interval. The table lists the inspection taking place during the last period which is not permitted by IWB-2500.

Please verify and explain the schedule for examination of the reactor vessel support skirt.

Response to RAI-2.2:

Details of Category B-K and Reactor Vessel welded attachments are provided in the Plan on page 8. NSPM has selected and scheduled the B-K, B10.10 components in accordance with the requirements of Table IWB-2500-1, with specific details provided in its Note 4.

MNGP has five welded attachments for Item Number B10.10. For a single vessel, only one welded attachment shall be selected for examination. Further, the one examined shall be an attachment under continuous load during normal operation. The reactor vessel support skirt attachment weld is the only one of the five that meets this requirement.

There is no requirement to perform a larger, single component in segments. Note 3 of Table IWB-2500-1 Category B-K states that "selected samples of welded attachments shall be examined each inspection interval." Because the skirt weld is a population of one required exam, the sample size is one each interval.

The reactor vessel support skirt has not been deferred to the end of the Interval. The skirt attachment weld is the single welded attachment selected for examination in accordance with Category B-K Note 4, and it is being performed in the 3rd Period of the Interval, which is approximately 10-years from its previous examination in 2011, thereby meeting the requirements of IWB-2411(a) and IWB-2420(a). NSPM finds it efficient, in alignment with ALARA principles, and in accordance with the Code to perform this single, welded attachment in one outage.

Appendix D will implement Category B-K, Item B10.10 correctly, as written.

RAI-2.3:

Category B-K, Items B10.20 and B10.30, and Category C-C, Items C3.20 and C3.30, Piping and Pump Welded Attachment Welds - Notes 2 and 3, respectively, state that for piping and pump welded attachments, a sample of 10 percent of the welded attachments associated with the component supports selected for examination under IWF-2510 shall be examined. For Category B-K, there are a combined 50 piping and pump welded attachments and only three (3) are listed to be inspected. Additionally, for Category C-C, there are a combined 84 piping and pump welded attachments and only 3 are listed to be inspected. These do not total to 10 percent of the welded attachments.

Please explain why 10 percent of the piping and pump welded attachments for each category is not being met.

Response to RAI-2.3:

Details of Category B-K piping, and pump welded attachments are provided in the Plan on page 8, with Category C-C details provided in the Plan on pages 13 and 14.

It should be noted that the Code requirement is not a direct 10 percent of the welded attachments. As stated in Note 5 of Table IWB-2500-1, Category B-K, and Note 5 of Table IWC-2500-1, Category C-C, it is 10 percent of the welded attachments associated with the component supports selected for examination under IWF-2510, which results in examination of less than 10 percent of the total population of welded attachments as described below:

For Category B-K, Item B10.20: There are a total of 144 piping supports; 39 of those supports have been selected for examination under IWF-2510. Of those supports selected for examination, only 12 have welded attachments; 10 percent of 12, or 1.2 rounded up to 2, would require examination.

For Category B-K, Item B10.30: There are 2 reactor recirculation pumps which have 3 welded support attachments each. Per Category F-A, Item F1.40, Note 3, all the supports on one of the multiple pumps are selected for examination under IWF-2510, which includes the supports connected to the pump's 3 welded support attachments; 10 percent of 3, or 0.3 rounded up to 1, welded attachment is required to be examined.

For Category C-C, Item C3.20: There are a total of 268 piping supports of which 42 piping supports (15%) have been selected for examination under IWF-2510. Of those 42 piping supports selected for examination under IWF-2510, 14 have welded attachments; therefore 10 percent of 14, or 1.4 rounded up to 2, welded attachments on piping supports require examination.

For Category C-C, Item C3.30: There are a total of six pumps that have welded attachments (4 RHR and 2 Core Spray pumps); Per Category F-A, Item F1.40, Note 3, two of the associated pump's supports will be selected for examination under IWF-2510, one RHR pump and one Core Spray pump. Both of the selected pump supports have welded attachments, therefore 10% of 2, or 0.2 rounded up to 1, pump welded attachment requires examination.

Appendix D will ensure NSPM will implement Category B-K and C-C correctly at MNGP for the noted Items.

RAI-2.4:

There appears to be inconsistencies in the "Examination Percentage Required" column shown in the inspection plan and schedule tables of Appendix D. For some categories (e.g. Category B-O), the licensee put the percentage of what would actually be inspected (12.5 percent) in lieu of what is actually required by ASME Code (10 percent). For other categories (e.g. Category B-P), the licensee stated the percentage required by ASME Code (100 percent).

Please explain the differences between Appendix D, the Inspection Plan and Schedule Tables, and, specifically, items in the "Examination Percentage Required" column with those required by IWB-, IWC-, IWD-, and IWF-2000 in the ASME Code.

Response to RAI-2.4:
NSPM would like to clarify that the tables provided in Appendix D of the MNGP Plan are used for scheduling the ISI components by Code Category and Item, or augmented and Owner-elected plans for implementation over the 10-year interval. It is based on the actual number of components for each category / item specific to MNGP. They are not intended to be a direct repeat-back of the IWx-2500-1 tables within ASME Section XI, but rather they are prepared such that the number of components and scheduling sequence of examinations meet the requirements of the Table IWx-2500-1, 10CFR50.55a, 10CFR50.55a alternatives, or augmented and Owner-elected plans. The ISI Plan Sections 3.0 through 7.0 provide descriptions and details of each Category and the applicable requirements.

The examination percentages are met by use of the ISI Plan, including Appendix D. Appendix D provides each applicable Code Category or alternative Category. The table for each category consistently lists the number of applicable components, the number that require examination, and the associated percentage of those components. For each Item, the frequency is described, and the number of required exams is listed on a per-period basis. Multiple notes are provided to explain the numbers and percentages, as needed.

For the example B-O mentioned above, Code Table IWB-2500-1, Category B-O requires weld exams on 10% of the peripheral CRD housings. Appendix D, Note 1 explains that 10% of the 24 peripheral drives is 3 (rounded up). Note 2 explains that there are two welds per peripheral drive (48 welds total). Using the actual weld count that requires examination, 6 welds of 48 is 12.5% of the total count that requires examination during the 5th Interval. Therefore, examination of 12.5% of the welds equates to meeting weld exam requirements on 10% of the peripheral CRD housings for Code Table IWB-2500-1, Category B-O.

Similar examples were described above in responses to RAI 2.1, 2.2, and 2.3. It can be seen that the numbers and percentages that NSPM has included in

Appendix D, including all applicable notes, are customized to provide an Interval long implementing schedule of examinations at MNGP for each Category and Item Number, or applied alternative.

The ISI Plan, including Appendix D, provides the details necessary for NSPM to implement the MNGP 5th Interval ISI Program to meet the required inspection percentages for each Category and Item.