



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

May 10, 2011

Mr. Timothy J. O'Connor
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company - Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

**SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT (MNGP) – EXAMINATION OF
CLASS I SMALL-BORE PIPING BUTT WELDS (TAC NO. ME4087)**

Dear Mr. O'Connor:

By letter dated May 14, 2010 (Accession No. ML101370259) Northern States Power Company – Minnesota (the licensee) corrected a commitment made regarding inspection of small-bore stainless steel butt weld connections. The commitment was made in MNGP's Application for Renewed Operating License dated March 16, 2005 (Accession No. ML050880245). Regarding in-service inspection, a paragraph in the Application stated:

The MNGP ASME [American Society of Mechanical Engineers] Section XI In-Service Inspection, Subsections IWB, IWC, and IWD Program is part of the MNGP ASME Section XI In-Service Inspection Program. This program is in accordance with ASME Section XI 1995 Edition through the 1996 Addenda and is subject to the limitations and modifications of 10 CFR 50.55a.

Under the "MNGP ASME Section XI In-Service Inspection (ISI), Subsections IWB, IWC, and IWD Program," Category B-F, B-J, C-F-1 and C-F-2 welds are being inspected under a Risk-Informed Inservice Inspection (RI-ISI) program that has been reviewed and authorized by the Nuclear Regulatory Commission (NRC) staff (Accession No. ML021490050). The RI-ISI program requires that 25 percent of the locations in the high risk region and 10 percent of the locations in the medium risk region be selected for inspection; non-socket welds are subject to volumetric examination.

The NRC staff concluded in its safety evaluation report (NUREG-1865, Accession No. ML063050414) for Monticello license renewal that, on the basis that the licensee used an appropriate methodology to exclude the aging effect of cracking in carbon steel small-bore piping and will perform a one-time inspection for cracking in stainless steel small-bore piping, the licensee's programs for managing aging effects in Class 1 small-bore piping was acceptable.

In the MNGP license renewal application annual update dated March 15, 2006 (Accession No. ML060800360), the licensee determined that butt weld connections less than 4 inches in diameter did not exist, and the requirement to inspect small-bore stainless steel butt welds was removed from the inspection scoping. As a result, the licensee did not inspect a sampling of small-bore stainless butt weld connections as part of the One-Time Inspection Aging

Management Program per the guidance of NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," Chapter XI, Program M32.

The licensee's May 14, 2010, letter stated that a recently completed review of plant drawings indicated the existence of a limited number of small-bore stainless steel butt weld connections, under examination Category B-J. Thus, the licensee proposed to update the Updated Safety Analysis Report (USAR) to indicate performance of augmented ISI volumetric examinations on nominal pipe size (NPS) 2-inch through less than NPS 4-inch stainless steel butt welds, and to add these small-bore stainless steel butt welds to the "MNGP ASME Section XI In-Service Inspection, Subsections IWB, IWC, and IWD Aging Management Program."

The licensee has made the following new commitment:

MNGP will perform augmented ISI volumetric examinations of ASME Class I stainless steel small-bore butt welds with a 2-inch nominal pipe size (NPS) through less than 4-inch NPS in accordance with MNGP ASME Section XI Inservice Inspection Subsections IWB, IWC, and IWD Aging Management Program.

The licensee's May 14, 2010, letter cites a precedent from Point Beach Nuclear Plant, where inspection of Category B-F, B-J, C-F-1 and C-F-2 welds is performed under a RI-ISI program that has been authorized by the NRC (Accession No. ML031630940). In its safety evaluation of the Point Beach request (NUREG-1839, Accession No. ML053420137), the NRC staff accepted crediting the RI-ISI program inspections for the One-Time Inspection Program: "This alternative is also credited for the inspection of small bore piping prior to the period of extended operation instead of the One-Time Inspection Program, as recommended in NUREG-1801 Section XI.M32."

On the basis of the MNGP license renewal SER, and the Point Beach precedent, the NRC staff finds MNGP's commitment to update the USAR and to add the small-bore stainless steel piping butt welds to the "MNGP ASME Section XI, Inservice Inspection Subsections IWB, IWC and IWD Aging Management Program" acceptable.

Sincerely,



Robert J. Pascarelli, Chief
Project Licensing Branch 3-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-263

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Sincerely,
/RA/

Robert J. Pascarelli, Chief
Project Licensing Branch 3-1
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Accession No.: **ML11122A096**

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*Safety evaluation transmitted by e-mail of 4/22/11 (Accession No. ML111120289).

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