



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

March 16, 2009

Mr. Michael D. Wadley  
Site Vice President  
Prairie Island Nuclear Generating Plant  
Northern States Power Company - Minnesota  
1717 Wakonade Drive East  
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 1 - REVIEW OF THE  
2008 STEAM GENERATOR TUBE INSPECTION REPORT (TAC NO. MD9684)

Dear Mr. Wadley:

By letter dated September 8, 2008 (Agencywide Documents Access and Management System Accession No. ML082520615), Nuclear Management Company, LLC, a predecessor license holder to Northern States Power Company, a Minnesota company (NSPM) submitted information summarizing the results of the 2008 steam generator tube inspections at Prairie Island Nuclear Generating Plant (PINGP), Unit 1. These inspections were performed during the 25<sup>th</sup> refueling outage (1R25).

As discussed in the enclosed review, the U.S. Nuclear Regulatory Commission staff concluded that NSPM provided the information required by the PINGP technical specifications and did not identify any technical issues that warranted follow-up action at this time.

If you have any questions regarding this matter, please contact me at (301) 415-4037.

Sincerely,

A handwritten signature in cursive script that reads "Thomas J. Wengert".

Thomas J. Wengert, Senior Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-282

Enclosure:  
As stated

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UNITED STATES NUCLEAR REGULATORY COMMISSION  
REVIEW OF 2008 STEAM GENERATOR TUBE INSPECTION REPORT  
PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 1  
DOCKET NO. 50-282

By letter dated September 08, 2008 (Agencywide Documents Access and Management System Accession No. ML082520615), Nuclear Management Company LLC, a predecessor license holder to the Northern States Power Company, a Minnesota company (the licensee), submitted information summarizing the results of the 2008 steam generator (SG) tube inspections at Prairie Island Nuclear Generating Plant (PINGP) Unit 1. These inspections were performed during the 25<sup>th</sup> refueling outage (1R25).

PINGP Unit 1 has two Framatome/AREVA model 56/19 replacement recirculating SGs. Each SG has 4,868 thermally treated Alloy 690 tubes which have an outside diameter of 0.750 inch and a nominal wall thickness of 0.043 inch. The tubes were hydraulically expanded at each end for the full depth of the tubesheet. The tubes are supported by support plates and antivibration bars (AVBs). All tube support plates are constructed from Type 410 stainless steel. The tube support plates have a minimum thickness of 1.18 inch (and a nominal thickness of 1.25 inch) and have quatrefoil-shaped holes through which the tubes pass. The AVBs are constructed from Type 405 stainless steel and are rectangular in cross section (0.5 inch by 0.3 inch).

The 2008 SG tube inspection was the second inservice inspection of these replacement SGs.

The licensee provided the scope, extent, methods, and results of the PINGP Unit 1 tube inspections in the document referenced above. In addition, the licensee described corrective actions (i.e., tube plugging) taken in response to the inspection findings.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the information provided by the licensee and held a conference call with the licensee on December 22, 2008, to clarify several items in the report. These clarifications were:

- During the 2008 steam generator tube inspections, additional wear indications at the AVBs and at the tube support plates were detected. Many of the new indications were small.
- No corrosion or degradation was observed during the secondary side inspections. The thin layer of debris (sludge) on the loose part trapping system screen was removed by scrubbing and was left in a clean condition. The only loose part detected in the steam generator was the inspection port gasket. This gasket was removed.
- During the inspection of the tube plugs, there was no evidence of leakage and all of the tube plugs still appeared to be adequately installed.

Enclosure

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by their technical specifications. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time, since the inspections appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

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Sincerely,

**/RA/**

Thomas J. Wengert, Senior Project Manager  
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\*via memo dated 3/4/09

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