PDR

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

October 16, 1997

EA 97-290

Mr. M. D. Wadley
Vice President, Nuclear Generation
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - $50,000 (NRC INSPECTION REPORT 50-282/306-97008(DRS))

Dear Mr. Wadley:

This refers to the System Operational Performance inspection conducted from April 14 to June 13, 1997, at your Prairie Island Nuclear Generating Plant. The inspection team assessed the auxiliary feedwater (AFW) system operational performance during a detailed review of the design, maintenance, operation, and surveillance testing of the AFW system. The report was issued by letter dated July 16, 1997, and a predecisional enforcement conference was held in the Region III office on August 8, 1997.

Based on the information developed during this inspection and the information that your staff provided during the predecisional enforcement conference, the NRC has determined that four violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) and the circumstances surrounding each violation are described in the subject inspection report. The violations concern Prairie Island staff's failure to implement a test program that ensured that the AFW system would meet its design expectations inservice and failure to understand and maintain aspects of the AFW system design. Further, these or similar issues were known to the Prairie Island staff but not adequately corrected.

The first issue concerned the Prairie Island staff's failure to establish an Inservice Test (IST) procedure acceptance criteria that would ensure the AFW system met certain design basis requirements. The site engineering staff developed the acceptance criteria for the AFW IST procedure using Section XI of the American Society of Mechanical Engineers code. However, the engineering staff never compared the acceptance criteria with the design requirements for the AFW system. As a result, the IST procedure would permit an AFW pump to be considered operable even though it had degraded below minimum design requirements. Although the potential existed for the operability of the AFW system to be compromised, members of the engineering staff confirmed that none of the AFW pumps had degraded below minimum system design requirements. In addition, your engineering staff identified, in 1991, a similar failure to establish IST procedure acceptance criteria for the safety injection pump design basis requirements. The engineering staff did not take prompt corrective action and identify that this problem also existed in the AFW system testing program. In our view, if your staff had implemented broader corrective action, it is likely this violation would not have occurred.

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The second issue concerned the Prairie Island staff's failure to analyze a discrepancy between the Updated Safety Analysis Report (USAR) and anticipated AFW flows. The Prairie Island engineering staff failed to maintain the USAR when discrepancies in the published flow requirements for the AFW system were identified during a 1992 AFW design basis reconstitution effort. Although your engineering staff recognized that the USAR value was incorrect, your staff failed to resolve the discrepancy or update the USAR. These violations collectively represented a failure to maintain the design basis for the AFW system and assure the system would perform satisfactory in service, and have been classified in the aggregate in accordance with the NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), as a Severity Level III problem.

Individually and collectively the safety significance of the violations was low since the AFW system always met the design basis requirements. However, the regulatory significance was high because: (1) your existing administrative processes and barriers failed to ensure that IST acceptance criteria considered the design basis requirements; (2) the engineering staff failed to appreciate the need to maintain the fidelity of the USAR; and (3) the engineering staff failed to implement timely and comprehensive corrective actions when they identified test program deficiencies and AFW flow discrepancies.

According to the Enforcement Policy, a base civil penalty for $50,000 is considered for a Severity Level III problem occurring before November 12, 1996. Since most of the noncompliance period occurred before November 12, 1996, a base civil penalty of $50,000 was considered for this case. Because your facility has been the subject of escalated enforcement actions within the last two years,[1] the NRC considered whether credit was warranted for *Identification* and *Corrective Action* according to the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. *Identification* credit was not warranted because these violations were identified by the NRC or plant staff identified the problem but failed to recognize the significance until prompted by the NRC. However, *Corrective Action* credit was warranted based on the corrective actions that have been implemented or were proposed at the enforcement conference. Several of your corrective actions included: (1) a verification of the correct flow rate to the intact steam generator and a resultant revision to the USAR; (2) a review of the design change program and a review of sample calculations for accuracy; (3) a revision to the acceptance criteria for the AFW pumps and training to the technical staff on the need to maintain the design basis; (4) an evaluation of the Section XI program and the acceptance criteria to ensure that the design basis is not compromised; (5) a review of the outstanding corrective action items for regulatory significance and prioritization; and (6) a bench marking of the condition reporting system with industry standards.

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1. **EA 97-073** issued a Severity Level III violation with no civil penalty on April 30, 1997 for the failure to comply with heavy loads requirements during the movement of a heavy load over a fully fueled reactor vessel. **EA 96-402** issued a Severity Level III violation with a $50,000 civil penalty on January 23, 1997, for an unreviewed safety question that was created by the licensee when they took credit for the non-seismic intake canal and operator actions following an earthquake.

Therefore, to emphasize the importance of an IST program that ensures the design basis of plant systems is not compromised, the need to perform timely evaluations when USAR discrepancies are identified, and the need to maintain the fidelity of the USAR, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the base amount of $50,000 for this Severity Level III problem.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements. According to 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket Nos. 50-282 and 50-306
License Nos. DPR-42 and DPR-60

Enclosure: Notice of Violation and Proposed Imposition of Civil Penalty

cc w/encl: Plant Manager, Prairie Island
State Liaison Officer, State of Minnesota
State Liaison Officer, State of Wisconsin
Tribal Council
Prairie Island Dakota Community

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