

## NOTICE OF VIOLATION

Northern States Power Company  
Prairie Island Nuclear Generating Plant

Docket Nos. 50-282; 50-306; 72-10  
Licenses No. DPR-42; DPR-60

During an NRC inspection conducted from April 14 through June 13, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

1. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that conditions adverse to quality are promptly identified and corrected; and in the case of significant conditions adverse to quality, the cause of the condition shall be documented, appropriately reported to levels of management, and corrective action taken to preclude repetition.

Contrary to the above, as of May 16, 1997, a significant condition adverse to quality, which was identified 4 years earlier, had not been fully corrected. The significant condition adverse to quality was that cable tray installations did not meet the separation criteria specified in USAR Section 8.7.2. The condition was identified in February 1992 and it took over 4 years, until July 1996, to conclude that the cable tray configurations were outside the plant's design basis. After this determination, the licensee did not identify that the scope of the problem went beyond the original trays until the NRC identified more cable trays, including the pressurizer heater circuits, that did not meet the separation criteria.

This is a Severity Level IV violation (Supplement I).

2. 10 CFR Part 50, Appendix B, Criterion III "Design Control," requires, in part, that design control measures shall provide for verifying or checking the adequacy of the design, such as by performance of design reviews or by use of alternate or simplified calculations.

Contrary to the above, as of the issue date for the calculations listed below, the design control measures failed to verify the adequacy of the design in that mathematical and process errors were not identified or new errors were introduced during the verification.

- "Condensate Storage Tank Piping Friction Loss NPSH," M-376-CD-001, Revision 0, October 1990, new errors were introduced by the independent reviewer who omitted approximately 45 feet of piping, ignored head losses through the entrance nozzle and pipe reducers, and used an incorrect value when determining the head loss through elbows.
- "Maximum Out of Service Time for Steam Line Drains Upstream of the Auxiliary Feedwater Pump Steam Supply Control Valves CV-31998 & CV-31999," SYS-AF-002, Revision 0, January 1992, contained errors in that it ignored 11 feet of piping. Also the independent reviewer introduced a

mathematical error on the magnitude of  $10^7$  by failing to properly convert from seconds squared to hours squared.

- "Determination of Possible Flow Rate in Cooling Water (CL) to Auxiliary Feedwater Pump Piping with Gate Valve Half Open to Verify Design Flow Will Pass Thru Half Open Gate Valve," ENG-ME-292, Revision 0, October 1992, contained errors in that it contained the wrong number of elbows, used the wrong pipe size; and was based on a non-conservative pressure.
- "Detailed Analysis of Auxiliary Feedwater Pump Room Internal Flooding," V.SMN.94.006, Revision 0, April 1994, contained errors that doubled the flowrate of water under a room door and overestimated the capacity of a covered trench by at least ten percent.
- "Cooling Water Header Pipe Failure Causing Flooding in the Auxiliary Feedwater Pump/Instrument Air Compressor Room," Revision 1, ENG-ME-148, August 1995, contained errors in that it used the results of V.SMN.94.006 without question and assumed that V.SMN.94.006 calculated the capacity of the floor drains to remove water, when V.SMN.94.006 did not address the drains.

This is a Severity Level IV violation (Supplement I).

Pursuant to the provisions of 10 CFR 2.201, Northern States Power Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector, within 30 days of the date of the letter transmitting this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or if contested, the basis for disputing the violation; (2) corrective action taken and the results achieved; (3) corrective action to be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. Where good cause is shown, consideration may be given to extending your response time.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of

withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information (required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois  
this 16th day of July 1997