



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137
June 25, 1979

TIC

Docket No. 50-282
Docket No. 50-306

Northern States Power Company
ATTN: Mr. Leo Wachter
Vice President
Power Production and System
Operation
414 Nicollet Mall
Minneapolis, MN 55401

Gentlemen:

Enclosed is IE Bulletin No. 79-13 which requires action by you with regard to your power reactor facility with an operating license.

Should you have any questions regarding this Bulletin or the actions required by you, please contact this office.

Sincerely,

James G. Keppler
for James G. Keppler
Director

Enclosures:

1. IE Bulletin No. 79-13
2. List of IE Bulletins Issued
in Last 12 Months

cc w/encls:

Mr. F. P. Tierney, Jr.,
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U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

June 25, 1979

IE Bulletin No. 79-13

CRACKING IN FEEDWATER SYSTEM PIPING

Description of Circumstances:

On May 20, 1979, Indiana and Michigan Power Company notified the NRC of cracking in two feedwater lines at their D. C. Cook Unit 2 facility. The cracking was discovered following a shutdown on May 19 to investigate leakage inside containment. Leaking circumferential cracks were identified in the 16-inch feedwater elbows adjacent to two steam generator nozzle elbow welds. Subsequent radiographic examination revealed crack indications in all eight steam generator feedwater lines at this location on both Units 1 and 2.

On May 25, 1979, a letter was sent to all PWR licensees by the Office of Nuclear Reactor Regulation which informed licensees of the D. C. Cook failures and requested specific information on feedwater system design, fabrication, inspection and operating histories. To further explore the generic nature of the cracking problem, the Office of Inspection and Enforcement requested licensees of PWR plants in current outages to immediately conduct volumetric examination of certain feedwater piping welds.

As a result of these actions, several other licensees with Westinghouse steam generators reported crack indications. Southern California Edison reported on June 5, 1979, that radiographic examination revealed indications of cracking in feedwater nozzle-to-piping welds on two of three steam generators of San Onofre Unit 1. On June 15, 1979, Carolina Power and Light reported that radiography showed crack indications in similar locations at their H. B. Robinson Unit 2. Duquesne Power and Light confirmed on June 18, 1979, that radiography has shown cracking in their Beaver Valley Unit 1 feedwater piping to vessel nozzle weld. Public Service Electric and Gas Company reported on June 20, 1979 that Salem Unit 1 also has crack indications. Wisconsin Public Service company decided on June 20, 1979 to cut out a feedwater nozzle-to-pipe weld which contained questionable indication, for metallurgical examination. As of June 22, 1979 and since May 25, 1979 seven other PWR facilities have inspected the feedwater nozzle-to-pipe welds without finding cracking indications.

The feedwater nozzle-to-pipe configurations for D.C. Cook and for San Onofre are shown on the attached figures 1 and 2. A typical feedwater pipe-to-nozzle weld joint detail showing the principal crack locations for D.C. Cook and San Onofre are shown on the attached figure 3.

On March 17, 1977, during heat-up for hot f Unit 1, a leak was discovered in the vessel the 16-inch diameter feedwater piping to st nondestructive examination of all nozzle we

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