

PDR

NOV 28 1975

Dennis L. Ziemann, Chief, Operating Reactors Branch #2, RL

DOCKET NO. 50-263

LICENSEE: NORTHERN STATES POWER COMPANY

FACILITY: MONTICELLO NUCLEAR GENERATING PLANT

SUMMARY OF MEETING HELD ON OCTOBER 31, 1975 TO DISCUSS THE MONTICELLO REACTOR VESSEL FEEDWATER NOZZLE CLADDING CRACKS

A meeting was held with Northern States Power Company (NSP) and its consultants NUTECH and General Electric Company (GE) to discuss the cracks observed in the Monticello reactor vessel feedwater nozzle corners. During the September 1975 outage, a crack was found in one of the four feedwater spargers while performing an inservice inspection program. Northern States Power elected to replace all four spargers with spargers of a more advanced design. In the process of removing the spargers, cladding defects were observed in all four of the reactor vessel feedwater nozzle corners. Dye penetrant testing of the nozzles indicated the presence of approximately 180 cracks. Further inspection and repair indicated that the cracks were "tight" with some cracks penetrating as much as 1/4 inch into the nozzle base material. Northern States Power Company and its consultants attributed the cracks to thermal fatigue of the cladding caused by feedwater temperature oscillations at the reactor vessel nozzle penetrations. Feedwater temperature oscillation measurements at another boiling water reactor, similar in design to that of Monticello, indicated temperature oscillations of 100°F per second at the reactor vessel nozzle corners. ~~General Electric~~ stated that the installation of the new spargers, which will have an interference fit with the "as left" nozzle will reduce the by-pass feedwater flow, which appears to be the major cause leading to cladding defects.

Repair of the defects consisted of grinding out the cracks. In some instances it was necessary to grind into the base metal to remove defects that had penetrated as much as 1/4 inch into the base metal. Dye penetrant testing was repeated after repair to ensure that all defects had been removed. General Electric stated that a stress analysis of the as left nozzle indicated that it complied with the requirements of Section III of the ASME code.

[Handwritten signature] *Amor*

The meeting concluded with the understanding among participants that there was no immediate safety concern. Northern States Power Company was requested to submit a technical report on this matter by late December 1975.

orig. signed
B.C. Buckley

B. C. Buckley
Operating Reactors Branch #2
Division of Reactor Licensing

Enclosure:
List of Attendees

cc:
Northern States Power Company
ATTN: Mr. L. O. Mayer, Director
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Anthony Z. Roisman, Esquire
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OFFICE ▶	RL:ORB #2 <i>Ref</i>	RL:ORB #2 <i>518</i>				
SURNAME ▶	BBuckley:ro	DLZiemann				
DATE ▶	11/28/75	11/28/75				

LIST OF ATTENDEES

GENERAL ELECTRIC

I. R. Kobsa
H. T. Watawbe
R. Schaffstall

NRC STAFF

H. L. Brammer
B. C. Buckley
P. Y. Chen
C. Y. Cheng
J. Collins
R. M. Gamble
W. Hazleton
M. R. Hum
S. Pawlicki
V. Potapovs
K. Seyfrit

DISTRIBUTION FOR MEETING SUMMARY

Docket
NRC PDR
Local PDR
ORB #2 Reading
NRR Reading
B. Rusche
E. G. Case
D. Eisenhut
R. S. Boyd
K. R. Goller
T. J. Carter
R. C. DeYoung
V. A. Moore
D. J. Skovholt
R. P. Denise
D. R. Muller
D. Vassallo
W. Butler
O. Parr
J. Stolz
K. Kniel
A. Schwencer
P. Collins
R. Vollmer
R. Houston
R. Purple
G. Lear
R. Reid
R. Clark
T. Speis
G. Knighton
G. Dicker
B. Youngblood
W. Regan
R. Tedesco
R. Maccary
V. Stello
H. Denton
J. Collins
G. Lainas
V. Benaroya
J. Knight
S. Pawlicki

L. Shao
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T. Novak
T. Ippolito
B. Grimes
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R. Diggs
NRC Participants
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