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SUBJECT: Responds to Generic Ltrs 83-10C & D, "Automatic Trip of Reactor Coolant Pumps." Implementation of Rev 1 to emergency response guidelines specifying appropriate reactor coolant pump trip setpoint resolves issues.

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WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

June 20, 1984

Director, Office of Nuclear Reactor Regulation
Attention: Mr. D. G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
"Automatic Trip of Reactor Coolant Pumps"

Reference: Letter from C. W. Giesler to D. G. Eisenhut dated June 15, 1983

Our previous letter of June 15, 1983, presented the plan for demonstrating compliance with the criteria for resolution of TMI Action Plan Requirements Item II.K.3.5 which were established in letters from Mr. Darrel G. Eisenhut of the Nuclear Regulatory Commission to all Applicants and Licensees with Westinghouse designed Nuclear Steam Supply Systems (83-10 c and d) dated February 8, 1983. The submittals which fulfill the established requirements have been transmitted to you by WOG letters OG-117, dated March 12, 1984 and OG-110, dated 12/1/84.

Section I of the attachment to NRC letter 83-10 c and d discusses "Pump Operation Criteria Which Can Result in RCP Trip During Transients and Accidents". Subsection 1 of Section I presents guidelines for establishing set-points for RCP Trip. The Westinghouse Owners Group response to this section of NRC Letters 83-10 c and d is contained in Revision 1 to the WOG Emergency Response Guidelines, which has been issued to member utilities. These guidelines will be implemented as plant specific emergency operating procedures at KNPP by the end of our scheduled 1985 refueling outage.

The RCP Trip Criterion being adopted in the KNPP plant specific procedure not only assures RCP trip for all losses of primary coolant for which trip is considered necessary but also permits RCP operation to continue during most non-LOCA accidents, including steam generator tube rupture events up to the

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design basis double-ended tube rupture. The generic applicability of the RCP trip criterion selected has been documented by the Westinghouse Owners Group Report entitled, "Evaluation of Alternate RCP Trip Criteria", which has been submitted to the NRC for review in letter OG-110.

The Westinghouse Owners Group has also submitted to the NRC, via letter OG-117, the report entitled "Justification of Manual RCP Trip for Small Break LOCA Events". As stated above, these submittals completed the WOG documentation comprising a generic reply to NRC Generic Letters 83-10 c and d.

Subsection 2 of Section I of the attachment to NRC Letters 83-10 c & d provides guidance for justification of manual RCP trip. Subsection 2a requires that compliance with 10CFR50.46 be demonstrated in an Appendix K small break LOCA analysis given that the RCPs are tripped two minutes after the onset of reactor conditions corresponding to the RCP trip setpoint. The Westinghouse Owners Group has generically verified, in the OG-117 submittal, that predicted LOCA transients presuming the two minute delayed RCP trip are nearly identical to those presented in Safety Analysis Reports utilizing the WFLASH Evaluation model. Thus, the final Safety Analysis Report for the Kewaunee Nuclear Power Plant demonstrates its compliance with the Subsection 2A guidelines.

The WOG has also performed most probable, best estimate, WFLASH analyses to demonstrate, generically, compliance with the guidelines presented in Subsection 2b of Section I of the attachment to NRC Generic Letters 83-10 c & d. These analyses identify that the minimum time available for operator action for the complete range of LOCA break sizes exceeds the value contained in N660; they show that reactor coolant pumps may be tripped at any time during a LOCA event without resulting in excessive clad temperatures. The applicability information presented in the generic report affirms the applicability of this best estimate analyses to the Kewaunee Nuclear Power Plant. Therefore, in combination with the Subsection 2a justification cited above, the best estimate analyses justify that manual RCP trip is acceptable for the Kewaunee Nuclear Power Plant when RCP trip setpoints consistent with Revision 1 to the Emergency Response Guidelines are in use. Furthermore, the generic report demonstrates that no additional contingency emergency procedures are required to address the scenarios which may follow a missed RCP trip setpoint.

As noted in our letter of June 15, 1983, the instrumentation used for determination of RCP trip will be reviewed to assure that there is an acceptable level of qualification, reliability and redundancy. It is our intent to perform this review in conjunction with the Post Accident Monitoring Information reviews being performed with our Control Room Design Review. The Control Room Design Review is currently in progress and is expected to be complete about November, 1984. At that time, the schedule for review and resolution of discrepancies related to post accident monitoring information will be identified and submitted to NRC.

In summary, the generic information presented by the Westinghouse Owners Group in the reports entitled "Evaluation of Alternate RCP Trip Criteria" and "Justification of Manual RCP Trip for Small Break LOCA Events" provides the response to NRC Generic Letters 83-10 c and d for the Kewaunee Nuclear Power

Mr. D. G. Eisenhut
June 20, 1984
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Plant. The implementation of Revision 1 to the Emergency Response Guidelines in the plant-specific procedures with an appropriate RCP trip setpoint specified resolves all issues associated with automatic tripping of the reactor coolant pumps.

Very truly yours,

CR Luoma for

Carl W. Giesler
Vice President - Power Production

CAS/js

cc - Mr. S. A. Varga, US NRC
Mr. Robert Nelson, US NRC

Subscribed and Sworn to
Before Me This 20th Day
of June 1984

Jeannine M. Stein
Notary Public, State of Wisconsin

My Commission Expires:
June 28, 1987