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Docket No. 50-329
Docket No. 50-330

Consumers Power Company
ATTN: Mr. James W. Cook
Vice President
Midland Project
1945 West Parnall Road
Jackson, MI 49201

Gentlemen:

Thank you for your interim report dated October 10, 1980, pursuant to 10 CFR 50.55(e) regarding small break/reactor coolant pump operation interaction. We will review your final report on this matter upon receipt.

Your cooperation with us is appreciated.

Sincerely,

RC Knop for

G. Fiorelli, Chief
Reactor Construction and
Engineering Support Branch

CC: Director, RCI/IE
Director, AEOD
Chief, OEB/MPA
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Consumers Power Company

James W Cook
Vice President, Midland Project

General Offices: 1945 West Parnall Road, Jackson, Michigan 49201 • (517) 788-0640

October 10, 1980

Mr J G Keppler, Regional Director
Office of Inspection and Enforcement
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND NUCLEAR PLANT -
UNIT NO 1, DOCKET NO 50-329
UNIT NO 2, DOCKET NO 50-330
SMALL BREAK/REACTOR COOLANT PUMP OPERATION INTERACTION
FILE: 0.4.9.28 UFT: 73*10*01, 42*40*01*20, 02342(S) SERIAL: 9770
References: S H Howell letters to J G Keppler; Midland Nuclear Plant; Unit No 1, Docket No 50-329; Unit No 2, Docket No 50-330; Small Break/Reactor Coolant Pump Operation Interaction:

1) Serial Howe-221-79; dated August 15, 1979
2) Serial Howe-271-79; dated October 19, 1979
3) Serial Howe-25-80; dated February 8, 1980

This letter, as were the referenced letters, is an interim 50.55(e) report concerning a potentially unsafe situation with respect to the tripping of reactor coolant pumps during certain primary system high void fraction conditions.

Small break LOCA analyses conducted following the TMI accident identified a need to trip the RCPs promptly after breaks of specific sizes. This action was necessary to eliminate the possibility of uncovering the core and exceeding 10CFR50 Appendix K limits if the RCPs became inoperable after the RCS reached high void fraction conditions. Actions taken by the operating plants as a result of this analysis were to modify operating procedures to require prompt manual trip of the RCPs if the low pressure ESFAS setpoint was reached. Long term requirements specified by IE Bulletin 79-05C included the incorporation of safety grade automatic RCP trip circuitry initiated to assure pump trip for events necessary based upon the existing analyses.

The Midland design will be modified to incorporate safety grade automatic RCP trip circuitry. Initiation of pump trip will be based upon an RCS pressure as low as possible without precluding actuation where required. The lower the actuation pressure, the fewer non-LOCA events will result in a pump trip. Quantification of this setpoint awaits further analytical work ongoing by B&W. At a minimum, it is desired that the final setpoint be below the existing low pressure ESFAS value (1500 psig).

OCT 20 1980

Requiring an RCP trip during any transient is not an optimal solution since it results in plant conditions which respond to operator control in a more sluggish manner. Consumers Power Company is therefore participating in a B&W generic program to develop more accurate computer models to predict post small break LOCA conditions. It is hoped that these more sophisticated analyses, coupled with results from future LOFT tests, will be able to justify continued RCP operation for all transient conditions.

The engineering, procurement and construction activities are scheduled to support completion of the required modifications by November 30, 1981. Another report, either interim or final, will be submitted on or before May 30, 1981.

James W. Cook

WRB/lr

CC: Director of Office of Inspection
& Enforcement
Att Mr Victor Stello, USNRC (15)

Director, Office of Management
Information & Program Control, USNRC (1)

R J Cook, NRC Resident Inspector
Midland Nuclear Plant Site (1)