UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
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AUG 2 0 1974

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James
Senior Vice President
Power Generation and Engineering
P. O. Box 1200
Green Bay, Wisconsin 54305

Docket No. 50-305

Gentlemen:

Thank you for your letter dated July 31, 1974, providing additional information regarding the violations which we brought to your attention in our letters dated May 6, 1974 and July 10, 1974. We will examine these matters during a subsequent inspection.

Your cooperation with us is appreciated.

Sincerely yours,

James G. Keppler
Regional Director

cc: C. W. Giesler, Superintendent
Nuclear Power

bcc w/ltr dtd 7/31/74:
RO Chief, FS&EB
RO Files
RO:HQ (4)
Licensing (4)
DR Central Files
PDR
Local PDR
NSIC
DTIE
OGC, Beth P-506A
GC (2)

CB

WISCONSIN PUBLIC SERVICE CORPORATION

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

July 31, 1974

U. S. Atomic Energy Commission
Directorate of Regulatory Operations
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attention: Mr. James G. Keppler
Regional Director

Dear Mr. Keppler:

Reference: Docket 50-305
Operating License DPR-43
Letter from Mr. J. G. Keppler to Mr. E. W. James
dated July 10, 1974

This response is submitted in answer to the request made in the above referenced letter for additional information to supplement our letter of May 24, 1974, which responded to ROIR 050-305/74-09.

In our response, we attempted to define an inoperable rod position indicator channel by demonstrating that a rod position indicator channel would be considered inoperable if (1) when power is restored that the rod position indication shows that the rod is misaligned from its bank by more than 15 inches; (2) the rod position indication channels failed to register rod position when power was restored; or (3) when all indicators lose the supply as was the case here, for a period of eleven minutes. Our preliminary abnormal occurrence report 50-305/74-3 dated March 3, 1974, and followed by our final report dated June 6, 1974, addressed itself to the failure of the power supply to the rod position indication channels, cause of failure and subsequent corrective action that was taken.

Our technical reasoning in determining that the system was operable is based on the following: Prior to loss of the power supply, Banks A, B and C, shutdown Banks A and B, and the part length rods were all in the full out position. Bank D was in an intermediate position. Upon loss of the power supply to the rod position indicators all rod position indications dropped immediately to the 25 step indication. Since the plant was under manual control, there was no possible manner in which all rods could have dropped to the 25 step level instantaneously. Upon re-energization of the rod position indicators from the alternate source, the indications were off by 15 steps.

In addition, a rod position indicator channel is not considered to be inoperable until it indicates that a rod is misaligned from its bank by more than 15 inches (24 steps) once it has been demonstrated that the rod itself is not misaligned; or when indication is lost altogether. We did demonstrate through use of a step counter and flux readings that power remained constant, thereby concluding that the rods did not move. When power was restored to the rod position indication system, the rod position indicators read 15 steps off normal which according to our definition does not constitute a technical specification violation. The maximum time that the rod position indicators were off normal is discussed below. The operators were aware of the loss of the inverter by the "Loss of Voltage" alarm.

The rod position indicators were originally calibrated to the output of the inverter, which was later confirmed to have a distorted wave form. When the alternate source was connected to the rod position indicators and the indications were off by 15 steps, we did not know which of the power supplies gave the proper indication, therefore, a recalibration would have to be performed, which was done as shown by the events tabulated below.

The following important plant history was taken directly from the Shift Supervisor's log:

Date		Hour
3/13/74	Received undervoltage alarm IRPI	0545
3/13/74	Started to repair BRB-110	1115
3/13/74	Commenced cooldown	1700
3/16/74	Completed repair on BRB-110	1230
3/19/74	Started Work Request 49-1306-RPI Indicators	0745
3/21/74	Started heatup for more operator training	2050
3/23/74	Reactor at Hot Shutdown condition	2250
3/24/74	Started cooldown	1100
3/26/74	Started heatup	1505
3/27/74	Reactor at Hot Shutdown condition	0650
3/27/74	ST3.20.2 - RPI Hot Calibration Checks started	2300
3/28/74	ST3.20.2 Completed	0605
3/28/74	Reactor Critical	1627

ST3.20.2 is a detailed calibration of all rod position indicators which is performed in the hot shutdown condition. They were calibrated using the alternate supply, from a safeguards bus, which is now the normal supply. We have not experienced any problems since the calibration and change in power sources has been made. The system remained 15 steps off normal from 0556 to 1700 on March 13, 1974, when the plant was cooled down. The remainder of the time the reactor was in a shutdown condition, as noted above and not taken critical until after the recalibration of the indicators.

With regard to Item 3 of our response in our May 24th letter discussing procedures and their review, we intend to comply with the requirements of paragraph 6.4.a.5 of the Technical Specifications. We will have members of the Plant Operations Review Committee review procedures which have not been previously reviewed and report to the full committee their adequacy and recommend approval by the Committee and Plant Superintendent.

Sincerely,

E. W. James
Senior Vice President
Power Generation & Engineering

EWJ:sna

cc - Dr. D. F. Knuth