NRC FORM 195 (2-76)

U.S. NUCLEAR REGULATORY COMMISSION

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DESCRIPTION: Ltr furn info on ECCS evaluation & info on fuel rod bow for the Kewaunee Plant.....

ENCLOSURE

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ACKNOWLEDGED

PLANT NAME: Kewaunee Plant

FOR ACTION/INFORMATION

SAFETY		ENVIRO	DHL 2-19-76
ASSIGNED AD :		ASSIGNED AD :	
✓ BRANCH CHIEF :	PURPLE (2)	BRANCH CHIEF :	
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✓	OELD			✓	LAINAS		SPANGLER
✓	GOSSICK & STAFF		ENGINEERING		IPPOLITO		
	MIPC		MACCARY				SITE TECH
✓	CASE		KNIGHT		OPERATING REACTORS		GAMMILL
	HANAUER		SIHWEIL		STELLO		STEPP
	HARLESS		PAWLICKI				HULMAN
					OPERATING TECH		
	PROJECT MANAGEMENT		REACTOR SAFETY	✓	EISENHUT		SITE ANALYSIS
✓	BOYD	✓	ROSS		SHAO		VOLLMER
	P. COLLINS	✓	NOVAK (3)	✓	BAER		BUNCH
	HOUSTON	✓	ROSZTOCZY		SCHWENCER		J. COLLINS
	PETERSON		CHECK		GRIMES		KREGER
	MELTZ						
	HELTEMES		AT & I		SITE SAFETY & ENVIRO		
	SKOVHOLT		SALTZMAN		ANALYSIS		
			RUTBERG		DENTON & MULLER		

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✓	TIC	REG. V-IE	ULRIKSON(ORNL)	
✓	NSIC	LA PDR		1446
	ASLB	CONSULTANTS		
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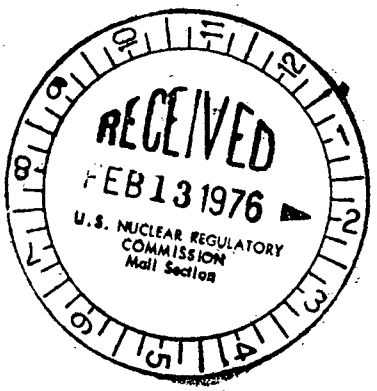
Regulatory Docket File

WISCONSIN PUBLIC SERVICE CORPORATION

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

February 10, 1976



Division of Operating Reactors
Office of Nuclear Reactors Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. R. A. Purple, Chief
Operating Reactors Branch #1

Gentlemen:

Subject: Docket 50-305
Operating License DPR-43
ECCS Evaluation

On January 26, 1976, we were informed by telephone that the consequences of fuel rod bow are required to be addressed prior to completion of the review of the ECCS evaluation and reanalysis for the Kewaunee Plant. Although three specific ECCS analyses have been provided since issuance of Appendix K to Titie 10 CFR Part 50, this was the first request we had received for information regarding rod bow as it specifically applies to the Kewaunee Plant.

The generic issue of rod bow effects has been addressed by Westinghouse in WCAP 8692, non-proprietary and WCAP 8691, proprietary. The analyses provided in these documents are presently being evaluated by the Commission's staff. A review of this analysis has been performed by our engineering personnel. This review indicated that the Kewaunee Plant is enveloped by the analyses provided in these WCAP reports.

Since the above-mentioned Westinghouse generic analyses result in no additional penalties for the Kewaunee Plant, a specific analysis for Kewaunee at this time would not be justified. Specific commitments concerning operating limits or monitoring at this time would also be premature in view of the generic evaluation presently in progress.

During our review of the WCAP analysis, it was noted that:

1. Fuel rod inspections of Westinghouse operating plants have discovered rod bow; however, rod bow has not been observed in the uppermost span of fuel rods (between grids 6 and 7).

2. The maximum effect of rod bow is in the 16 x 16 element which results in a penalty of 5.6%. The penalty of 14 x 14 element employed at Kewaunee is 4.25%.

Although we consider any action to reduce the operating margin of the Kewaunee facility premature in view of the generic evaluation presently in progress, we note that an adequate margin exists between the $F_Q \times P_{Rel}$ limits assumed in the safety analyses and the maximum predicted $F_Q \times P_{Rel}$ for CAOC operation as presented in our submittal of January 22, 1976. This margin would be adequate to accommodate the 4.25% worst case penaity of a 14 x 14 element over all fuel element grid spans where rod bow has been observed.

Yours very truly,

E. W. James, Senior Vice-President
Power Supply and Engineering

EWJ/ml