UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 18, 1980

Docket Nos. 50-315
and 50-316

Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
Post Office Box 18
Bowling Green Station
New York, New York 10004

Dear Mr. Dolan:

We have completed our review of the Technical Specification requirements for the Rod Position Indication (RPI). Our review was based on the information provided by Indiana and Michigan Electric Company in letters dated October 17, 1979, January 16, 1980 and June 17, 1980. We have determined that you are in compliance with our requirements with regard to Control Rod Position Indication Systems at Westinghouse PWRs. A copy of our evaluation is enclosed for your information.

Sincerely,

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosure:
Safety Evaluation Report

cc: w/enclosure
See next page

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August 18, 1980

Mr. John Dolan
Indiana and Michigan Electric Company

cc: Mr. Robert W. Jurgensen
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Enclosure

SAFETY EVALUATION REPORT BY THE OFFICE OF NUCLEAR REACTOR REGULATION

WESTINGHOUSE ROD POSITION INDICATION

Background

The staff recently completed a review of the LER's and Technical Specification requirements related to the Control Rod Position Indication Systems (RPI) at Westinghouse PWRs and determined that a wide variation exists in the number of LER's received and the Technical Specification requirements.

Discussion and Evaluation

Westinghouse has performed safety analyses for control rod misalignment up to 15 inches or 24 steps (one step equals 5/8 inch). Since analysis of misalignments in excess of this amount have not been submitted, we have imposed an LCO restricting continued operation with a misalignment in excess of 15 inches. Because the analog control rod position indication system has an uncertainty of 7.5 inches (12 steps), when an indicated deviation of 12 steps exists, the actual misalignment may be 15 inches. This is because one of the coils, spaced at 3.75 inches, may be failed without the operator's knowledge. The Standard Technical Specifications were written to eliminate any confusion about this, and restrict deviations to 12 indicated steps. Surveillance requirements, on the indication accuracy of 12 steps, were also prepared to ensure that the 15 inch LCO is met. Since there is no difference intended in requirements issure for any Westinghouse reactor, plants with Technical Specifications written in different terms of misalignment should consider the 12 step instrument inaccuracy when monitoring rod position.

A related problem is that the installed analog control rod position indication system equipment may not, in some areas, be adequate to maintain the control rod misalignment specification requirement because of drift problems in the calibration curves. This is evidenced by numerous LER'sconcerning rod position indication accuracy. In these cases, the uncertainty may be more than 12 steps.

Indiana and Michigan Electric Company was requested by letter dated October 29, 1979 to review the Technical Specifications for the D.C. Cook Unit No. 1 & 2 to ensure that the control rods are required to be maintained with $\pm$ 12 steps indicated position and that the rod position indication system is accurate to within $\pm$ 12 steps.

The D.C. Cook Unit Nos. 1&2 Technical Specifications require that the control rods are maintained within ± 12 steps indicated position. By letter dated March 19, 1979, the licensee requested a Technical Specification change that would explicitly allow for measurement of the LVDT coil stack voltages to verify rod position and eliminate the need for LER submittal due to faulty RPI readings.

In our October 29, 1979 letter we stated that the indicated (ROD) position requirement of the current Technical Specifications can be fulfilled by the LVDT voltage measurements provided that a sufficient data base has been established. In response to our October 29, 1979 by letter the licensee in its letter dated January 16, 1980 stated that they agreed with our determination, however they still believe that their proposed Technical Specifications more clearly defined the action to be taken in the event the RPI system should indicate a rod misalignment of greater than ± 12 steps. They further stated that measurements will be taken, as required during refueling outages for both units to obtain the necessary correlation between LVDT coil voltages and rod position. By letter dated June 17, 1980 the licensee stated that the required measurements have been taken on both units of the Cook Plants to obtain the necessary correlation between LVDT coil voltages and rod position. In addition the licensee stated that through discussion with members of the NRC staff they were informed that the proposed Technical Specification changes proposed in the March 19, 1979 letter were unnecessary, and therefore they were withdrawn.

Based on the licensees Technical Specification and the additional information submitted we find that the Technical Specifications are in compliance with our request and are therefore acceptable.