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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 your submittals regarding TMI Action Plan Items I.A.2.1.4, Upgrading of RO and SRO Training, and II.B.4.1, Training for Mitigating Core Damage for the D. C. Cook Nuclear Plant, Unit Nos. 1 and 2.

Based on our review, we conclude that the requirements of TMI Action Plan Items I.A.2.1.4 and II.B.4.1 have been met, as stated in the enclosed Safety Evaluation Report. This review consisted of a comparison of the evaluations and conclusions reported in the Technical Evaluation Report prepared by Science Applications, Inc. (copy attached to Safety Evaluation) with the NUREG-0660 and NUREG-0737 positions.

We now consider NUREG-0737 Items I.A.2.1.4 and II.B.4.1 resolved for D. C. Cook Nuclear Plant, Unit Nos. 1 and 2.

Sincerely,

Original signed by:
S. A. Varga

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

Enclosures:
1. Safety Evaluation Report
2. Technical Evaluation Report

cc w/enclosures:
See next page

OFFICE	ORB#1:DL	ORB#1:DL					
SURNAME	DWigginton:dm	SVarga					
DATE	02/10/83	02/10/83					

Mr. John Dolan
Indiana and Michigan Electric Company

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James G. Keppler
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

(ITEMS I.A.2.1.4 and II.B.4.1 of NUREG-0737)

DONALD C. COOK NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

As a consequence of the accident at TMI 2, implementation of a number of new requirements has been recommended for operating reactors. These new requirements are described in NUREG-0660, "NRC Action Plan Developed as a Result of the TMI 2 Accident," May 1980, and NUREG-0737, "Clarification of TMI Action Plan Requirement," November 1980. The NRC staff has also requested licensees to submit information sufficient to permit an independent evaluation of their response to these new requirements. This report provides an evaluation of the response to Action Plan Items I.A.2.1.4 and II.B.4, by Indiana and Michigan Electric Company (IMEC).

2.0 EVALUATION

ITEM I.A.2.1.4

Indiana and Michigan Electric Company in submittals to fulfill TMI Action Item I.A.2.1.4, has established a program to assure that all reactor operator and senior operator license candidates have the prescribed experience, qualification, and training. Indiana and Michigan Electric Company has submitted a revised training program that includes training in areas required by the Task Action Plan Item I.A.2.1.4. The training programs in heat transfer, fluid flow, and thermodynamics, have been developed and are presently taught by the licensee.

Our consultant, Science Applications Incorporated (SAI), has reviewed the licensee's submittals and prepared the attached Technical Evaluation Report (TER). The TER concluded that the Donald C. Cook training program for reactor operators and senior reactor operators did not meet the requirements of Enclosure 1 of NUREG-0737, since the licensees response to NRC question as to whether the programs met the requirements, only briefly stated that they did not. The licensee responsed to further NRC questions (Reference 1 and 2) stating that their training programs covered the areas of heat transfer, fluid flow and thermodynamics; however, the calculation of such terms as critical flux, critical power DNB ratio, and hot channel factor were covered only as basic concepts and not as detailed descriptions and mechanisms, since these calculations are performed by computer programs. Basic calculations, such as determining the total peaking factor from the radial and axial peaking factors are performed by the trainees to illustrate the students understanding of the terms.

The TER also concludes that the Donald C. Cook requalification program does not meet the requirements of TMI Action Item I.A.2.1.4 because the 80 contact-hours criterion was not met in the training for heat transfer, fluid flow, thermodynamics and accident mitigation with core damage. The Division of Licensing, on September 13, 1982, clarified the 80-hour criterion for recurring requalification training programs by deleting the 80 contact-hour requirement. On this basis we have reviewed the TER and conclude that the training and requalification training programs at Donald C. Cook Nuclear Power Plant meet the requirements of TMI Action Item I.A.2.1.4.

ITEM II.B.4

Indiana and Michigan Electric Company has submitted the outline of a program for training in mitigating core damage. The program covers all of the training subjects specified in the INPO Report STF-01, Revision 1, dated January 18, 1981. These INPO guidelines, in turn, are based upon the training program outlined in the letter from H. R. Denton to all power reactor applicants and licensees, dated March 28, 1980. Our consultant's (SAI) review of the licensee's program for the Donald C. Cook Plant indicated that the core damage mitigation training program did not contain the related subjects of heat transfer, fluid flow, and thermodynamics and did not provide the requisite number of contact-hours. The above subjects are not part of the core damage mitigation training criteria and were adequately covered in initial training and in the present training and requalification training programs. The training time specified in the criteria provided to SAI stated that approximately 80 contact-hour covering all four subjects would be required to adequately cover them. We have reviewed the initial training program in mitigation core damage and determined that the four subjects were adequately covered.

In reviewing the licensee's response to the initial NRC questions, it was noted that the Plant Manager and later the new Operations Supervisor had not been included in the list of personnel in the operating chain required to have core damage mitigation training. In the licensee's response (Reference 2) and later with a verbal agreement with the Resident Inspector, the licensee has stated that the present Plant Manager and Operations Supervisor will complete this training in February 1983.

On this basis we have reviewed the TER and conclude that core damage mitigation training meets the staffs requirements of the TMI Action Item II.B.4.1 and is therefore acceptable.

This completes the action required by Item II.B.4. However, future changes to the facilities, such as installation of additional instrumentation to detect conditions of inadequate core cooling, should be reflected in updates to the training program.

3.0 CONCLUSIONS

The information submitted by Indiana Michigan Electric Company and supplemented with verification reviews by Region III (Inspection Reports No. 50-315/81-03, 50-316/81-03, 50-315/82-21, and 50-316/81-24), provided sufficient details of the programs for upgrading RO and SRO training and for training in mitigating core damage for the staff to conclude that the requirements of Item I.A.2.1.4 and II.B.4 have been met.

The following NRC personnel have contributed to this Safety Evaluation:

E. R. Swanson
K. R. Ridgway

4.0 REFERENCES

(1) Letter from S. A. Varga (DOL) to J. Dolan, IMEC dated November 11, 1982.
(2) Letter from R. F. Hering (IMEC) to H. R. Denton (NRR) dated December 28, 1982.