



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

SAFETY EVALUATION

ITEMS I.A.2.1.4 AND II.B.4.1 OF NUREG-0737

MILLSTONE NUCLEAR POWER STATION UNITS 1 AND 2

NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NOS. 50-245 AND 50-336

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 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 Requirements," November 1980. The NRC staff has requested licensees to submit information sufficient to permit an independent evaluation of their response to these requirements. This report provides an evaluation of the response to TMI Action Plan Items I.A.2.1.4 and II.B.4.1 by Northeast Nuclear Energy Company (NNECO).

2.0 EVALUATION

ITEM I.A.2.1.4

NNECO has modified the initial and requalification training programs to include training in areas required by TMI Action Plan Item I.A.2.1.4. The training programs include instruction in heat transfer, fluid flow, thermodynamics and mitigation of accidents involving a degraded core. The training programs provide an increased emphasis on reactor and plant transients.

An NRC staff contractor, Science Applications Incorporated (SAI), has reviewed the licensee's submittals and prepared the attached Technical Evaluation Report (TER). The NRC staff has reviewed this evaluation and evaluated various aspects of the licensed operator training programs during Combined Inspection 50-245/82-23 and 50-336/82-25, for which the licensee's submittals lacked sufficient detail for the staff and SAI to conclude that certain requirements had been met.

SAI noted that the licensee's original submittal dated August 15, 1980 (submittal Item 2) did not provide details concerning the level of instruction of the heat transfer, fluid flow and thermodynamics course given during the initial reactor and senior reactor operator training program. A subsequent response by the licensee dated May 10, 1982 (submittal Item 4) did not provide any further program specifics but did state that their in place program provided instruction to the level of detail spelled out in Enclosure 2 of the Denton letter. NRC staff review of this area during Combined Inspection 50-245/82-23 and 50-336/82-25 determined that the scope and content of the licensee's training program met or exceeded the criteria specified in Enclosure 2 of Denton's letter and was considered acceptable by the staff.

SAI also noted that course outlines for mitigation of accidents involving a degraded core submitted May 10, 1982 (submittal items 6 and 7) did not contain a one-for-one correspondence with Enclosure 3 of Denton's letter. SAI did feel that significant correlation between the licensee's submittal and Enclosure 3 existed to be considered acceptable. NRC staff review of the licensee's program during Combined Inspection 50-245/82-23 and 50-336/82-25 found the course of instruction, prepared by General Physics Corporation, to meet the criterion specified in Enclosure 3 of Denton's letter and was considered acceptable by the staff.

With respect to the licensee's requalification program for licensed operators in the area of control manipulations, SAI noted that the licensee's August 15, 1980 submittal (item 3) did not provide a list of control manipulations included in the training program. The licensee's submittal did state that each licensed operator would perform control manipulation as required by Enclosure 4 of Denton's letter. The licensee's subsequent submittal (item 4) dated May 10, 1982 reaffirmed their commitment to perform all control manipulations specified in Enclosure 4 of Denton's letter, however, the listing of manipulations was not specified. During Combined Inspection 50-245/82-23 and 50-336/82-25 the NRC staff confirmed that all control manipulations specified in Enclosure 4 of Denton's letter are required to be performed during the licensed operator requalification program. In addition, a sample of records was found to include documentation of satisfactory completion of the specified manipulations during simulator training. This item was considered acceptable by the staff.

Initial implementation of these training programs was verified to be acceptable during NRC Region I Combined Inspections 50-245/81-06 and 50-336/81-05.

#### ITEM II.B.4

NNECo has developed a training program to teach the use of installed equipment and systems to control or mitigate accidents in which the core is severely damaged.

The program was prepared by the General Physic Corporation and includes training subjects equivalent to those specified in Enclosure 3 to the letter from H.R. Denton to all power reactor applicants and licensees, dated March 28, 1980. SAI's review of NNECo's program indicated that the training content meets the staff requirements of TMI Action Plan Item II.B.4.1 and was therefore considered acceptable. SAI did note that some non-operating personnel, notably managers and technicians in instrumentation and control, health physics and chemistry departments should receive portions of the training which are commensurate with their responsibilities. During Combined Inspection 50-245/82-23 and 50-336/82-25 the NRC staff reviewed attendance records of the Mitigating Reactor Core Damage program. Included in the attendance records were Shift Technical Advisors, Training Department instructors, engineers, and managers of the Instrument and Controls, Chemistry and Health Physics Departments and the plant superintendents of both units. The licensee's program was considered acceptable by the NRC staff.

Initial implementation of this training program was verified to be acceptable during NRC Region I Combined Inspections 50-245/81-06, 50-336/81-05, 50-245/81-14 and 50-336/81-12.

This completes the action required by Item II.B.4.1. 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 NNECo and the above referenced Region I reports provided sufficient details of the programs for upgrading RO and SRO training and for training for mitigating core damage for the staff to conclude that the requirements of TMI Action Plan Items I.A.2.1.4 and II.B.4.1 have been met.

Attachment:  
SAI Technical Evaluation  
Report