

MAR 24 1983

MEMORANDUM FOR: D. G. Eisenhut, Director, Division of Licensing, NRR

FROM: C. E. Norelius, Director, Division of Project and Resident Programs

SUBJECT: SAFETY EVALUATION OF NUREG-0737, ITEM II.B.2.2.
DESIGN REVIEW OF PLANT SHIELDING-ACCESS TO VITAL AREAS
ZION NUCLEAR POWER STATION, UNITS 1 AND 2
TAC NOS. 47986 AND 47987

Per your request, we have completed the review of the subject TMI Action Item. The Safety Evaluation documenting this review is attached.

Forty staff hours were used in this evaluation.

Any questions on this subject should be directed to K. R. Ridgway (FTS 384-2544)

C. E. Norelius, Director
Division of Project and
Reactor Programs

Enclosure: SE

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SAFETY EVALUATION OF NUREG-0737, ITEM II.B.2.2 - DESIGN REVIEW
OF PLANT SHIELDING-ACCESS TO VITAL AREAS

Commonwealth Edison Company
Zion Nuclear Power Station, Units 1 and 2
DOCKETS NOS. 50-295; 50-304

INTRODUCTION

Following the accident at TMI-2, the NRC staff developed Action Plan NUREG-0660, and "Clarification of TMI Action Plant Requirements" NUREG-0737, to provide for improved safety at nuclear power plants.

NUREG-0737, Item II.B.2 directed all licensees to perform a design review of plant shielding and to provide for adequate access to vital areas. The licensee has not requested technical deviations from the criteria of Item II.B.2.

The following evaluation contains the results of the post implementation review regarding II.B.2.2 entitled Plant Shielding Modification for Vital Area Access.

EVALUATION

The inspector examined the conclusions resulting from the licensee's shielding review (performed by Sargent and Lundy Engineers) as contained in the Post-Accident Radiation Shielding Design Review dated December 31, 1979, for the Zion Nuclear Power Station, Units 1 and 2.

The shielding review concluded that the reactor coolant and containment sampling systems required modification, the operating panels for the hydrogen recombiners needed relocation, and the iodine monitors on the control room ventilation intake needed upgrading. On March 11, 1983, the inspectors verified by direct observation that except for the iodine monitors, the plant modifications recommended in the shielding design review had been completed. Interim measures, consisting of increased filter train efficiency testing, have been implemented while the licensee resolves problems with the computer software associated with the iodine monitors.

The inspectors verified by selective review and walkdown of procedures that post-accident procedural controls for ensuring adequate access to vital areas were implemented. On March 11, 1983, the inspectors reviewed ZCP series 701, "Zion Post-Accident Sampling" procedures, and traced the path from the radioanalytical laboratory to the post-accident sample station in order to determine potential sources of radiation under post-accident conditions. During this walkdown the inspectors discussed potential post-accident sources of radiation with licensee representatives. The inspectors did not observe any potential sources of radiation that were not included in the licensee's evaluation.

CONCLUSION

Except for upgrading of the control room ventilation intake monitors, the licensee has acceptably completed the modifications resulting from the plant shielding review for post-accident access to vital areas as outlined in NUREG-0737, Item II.B.2. Verification of the adequacy of the control room ventilation intake monitor upgrading will be made in conjunction with verification of NUREG-0737 Item II.D.3.4.

The following NRC personnel have contributed to this Safety Evaluation.

D. E. Miller
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