

MAR 7 1983

DCS MS-016

Docket No. 50-285

Mr. W. C. Jones
Division Manager, Production
Operations
Omaha Public Power District
1623 Harney Street
Omaha, Nebraska 68102

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Dear Mr. Jones:

The staff has completed its review of actions taken at the Fort Calhoun Station, Unit No. 1, in response to TMI Action Item II.B.2.2 from NUREG-0737, "Plant Shielding Modifications for Vital Area Access." The review included site inspections to verify plant modifications, adequacy of procedural controls, accessibility of vital areas following an accident, and evaluation of a shielding design study performed by Omaha Public Power District. Based on our review, we conclude that the requirements of NUREG-0737, Item II.B.2.2 have been met. Our Safety Evaluation is enclosed.

Sincerely,

Original signed by:

Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

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Public Power District

Flyn T. Shaw, Esq.
Boeuf, Lamb, Leiby & MacRae
3 New Hampshire Avenue, N.W.
Washington, D. C. 20036

Jack Jensen
Clerk, Washington County
Board of Supervisors
Lincoln, Nebraska 68023

Environmental Protection Agency
Division VII
N: Regional Radiation
Representative
East 11th Street
Kansas City, Missouri 64106

Metropolitan Planning Agency
N: Dagnia Prieditis
100 West Center Road
Lincoln, Nebraska 68107

Larry Yandell
N.R.C. Resident Inspector
P.O. Box 309
Lincoln, Nebraska 68023

Charles B. Brinkman
Manager - Washington Nuclear
Operations
Power Systems
Combustion Engineering, Inc.
100 Woodmont Avenue
Bethesda, Maryland 20814

Regional Administrator
Nuclear Regulatory Commission, Region IV
Office of Executive Director for Operations
Ryan Plaza Drive Suite 1000
Dallas, Texas 76011

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SAFETY EVALUATION REPORT
NUREG 0737, ITEM II.B.2 - DESIGN REVIEW OF PLANT SHIELDING -
ACCESS TO VITAL AREAS

INTRODUCTION

New requirements have been recommended for operating power reactors because of the accident at Three Mile Island (TMI), Unit 2. These requirements were developed into an "Action Plan," NUREG 0660, by the NRC staff. Later changes were recommended in "Clarification of TMI Action Plan 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 design review should identify the location of vital areas and equipment in which personnel occupancy may be limited by the radiation fields during postaccident operations of these systems. Also, the licensee was required to provide for adequate access to vital areas by design change, increased permanent or temporary shielding, or postaccident procedural controls. The design review study was to determine the corrective actions needed for vital areas of the nuclear power reactor during an accident situation.

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 NUREG 0737, Item II.B.2, performed at Ft. Calhoun.

EVALUATION

The verification of implementation of plant modifications recommended by the Shielding Design Review report was conducted by a Region IV NRC inspector on October 25-29, 1982, and the results were reported in Inspection Report 50-285/82-26. The shielding design review's methods, source terms, determination of vital areas, and computation of dose rates were adequate and consistent with the guidelines of NUREG 0737, Item II.B.2.

As a result of the shielding design review study, the following four modifications were made:

- . A concrete shield wall was installed on the west side of the SW corner of the corridor serving the control room complex.
- . A concrete shield wall was installed on the north wall of the pipe penetration area which shields the personnel area corridor and the radiochemistry and chemical analysis laboratories.
- . A concrete shield was installed around the radwaste control area.
- . Installation of remote-level sensors were made in the sumps of the safety injection and containment spray pump areas 1 and 2 which read out in the control room.

These modifications were verified to be satisfactorily completed during the above-mentioned inspection.

The NRC inspectors traced the routes in the nuclear plant that would be traversed by plant personnel during an accident. During this "walkdown," the NRC inspectors discussed potential sources of radiation, and did not discover any sources that were not included in the licensee's evaluation.

The NRC inspectors reviewed the procedures for the Postaccident Sample Acquisition and found them adequate and operational.

CONCLUSION

Based on our review of the Ft. Calhoun's shielding design review, the licensee has completed the modifications resulting from the plant shielding design review for postaccident access to vital areas as outlined in NUREG 0737, Item II.B.2, and the requirements for this item have been met.