

July 30, 1981

Docket No. 50-219
LS05-81-07-091



Mr. I. R. Finfrock, Jr.
Vice President - Jersey Central
Power & Light Company
Post Office Box 388
Forked River, New Jersey 08731

Dear Mr. Finfrock:

SUBJECT: SEP TOPIC VI-7.A.3, ECCS ACTUATION SYSTEM, SAFETY
EVALUATION REPORT FOR OYSTER CREEK

The enclosed staff safety evaluation is based on a contractor document that has been made available to you previously. This evaluation supports the findings of the staff safety evaluation of Topic VI-7.A.3 and proposes modifications to some equipment to provide testability and the Technical Specifications should be changed to be more specific.

The need to actually implement these changes will be determined during the integrated safety assessment. This topic assessment may be revised in the future if your facility design is changed, or if NRC criteria relating to this topic are modified before the integrated assessment is completed.

Sincerely,

Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing

Enclosure:
As stated

cc w/enclosure
See next page

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Mr. I. R. Finfrock, Jr.

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TOPIC: VI-7.A.3 ECCS ACTUATION SYSTEM

I. INTRODUCTION

The ECCS actuation system was reviewed with respect to the testability of operability and performance of individual active components of the system and of the entire system as a whole under conditions as close to the design condition as practical. The purpose of the reviews was to assure that all ECCS components (e.g. valves and pumps) are included in the component and system test and to assure that the scope of the periodic testing is adequate and meets the requirements of CDC 37. The technical specifications were also audited for large differences between the present test requirements and those in the Standard Technical Specifications.

II. REVIEW CRITERIA

The current licensing criteria are identified in Section 2 of EG&G Report 0410J "ECCS Actuation System".

III. Related Safety Topics and Interfaces

The scope of review for this topic was limited to avoid duplication of effort since some aspects of the review were performed under related topics. Related topics and the subject matter are identified below. Each of the related topic reports contain the acceptance criteria and review guidance for its subject matter.

Topic VI-3, "Containment Pressure and Heat Removal Capability."

Topic VI-4, "Containment Isolation System."

Topic VI-7, "Emergency Core Cooling System."

Topic VI-7.C, "ECCS Single Failure Criterion and Requirements for Locking Out Power to Valves Including Independence of Interlocks on ECCS Valves."

Topic VI-9, "Main Steam Isolation."

Topic VI-10.A, "Testing of Reactor Trip System and Engineered Safety Features Including Response Time Testing."

Only Topic VI-10.A. is dependent on the present topic information for completion. Response time testing is addressed in Topic VI-10.A.

IV. REVIEW GUIDELINES

The review guidelines are presented in Sections 3, 4 and 5 of Report 0410J.

V. EVALUATION

Report 0410J describes the extent to which the ECCS actuation system can be tested, except for the question of response time testing. The report notes that the testing of the low pressure core spray and automatic de-pressurization systems satisfy current licensing requirements. However, the design of the emergency condenser logic does not allow testing of one system during operation without disabling both systems.

Also, the ECCS surveillance requirements stated in the plant technical specifications do not meet current licensing requirements, since specific periodic channel checks, functional tests and calibrations are not required for each instrument parameter in each logic channel for each ECCS system.

VI. CONCLUSION

Based upon our review of our contractor's evaluation, the staff concludes that the Oyster Creek plant does not conform to current licensing criteria because the logic for the isolation condenser system does not lend itself to testing and the technical specifications are inadequate. The isolation condenser logic should be modified to satisfy IEEE Std 279-1971 and a suitable change in the Technical Specifications should be developed.