

June 29, 1981

Docket No. 50-219  
LS05-81- 06-117



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.C.1, APPENDIX K - ELECTRICAL INSTRUMENTATION  
AND CONTROL (EI&C) RE-REVIEWS, SAFETY EVALUATION FOR  
OYSTER CREEK

The enclosed staff safety evaluation is based on contractor's documents that have been made available to you previously. This document supports the findings of the staff safety evaluation of Topic VI-7.C.1 and recommends modifications to the onsite power distribution systems.

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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*Handwritten signature/initials*

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
June 29, 1981

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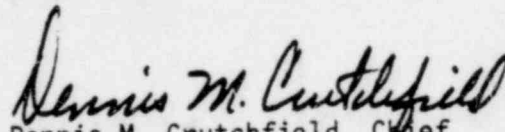
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Enclosure:  
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See next page

Mr. I. R. Finfrock, Jr.

cc

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TOPIC: VI-7.C.1 APPENDIX K - ELECTRICAL INSTRUMENTATION AND CONTROL  
(EI&C) RE-REVIEWS

I. INTRODUCTION

During the Appendix K reviews of some facilities initially considered, a detailed EI&C review was not performed. Accordingly we intended to re-review the modified ECCS of these facilities to confirm that it is designed to meet the most limiting single failure. Several types of failure were considered as candidates for designation as the most limiting. Because of the scope of the other SEP Topics, it was decided that, for the purpose of this study (and to reduce replication of effort on other SEP Topics), the loss of a single ac or dc onsite power system was the most limiting failure. Accordingly, this topic was limited to an evaluation of the independence between the onsite power systems.

II. REVIEW CRITERIA

The review criteria are presented in Section 1 of EG&G Report 1200F, "Independence of Redundant Onsite Power Systems."

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. The 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.

VI-4	Bypass and Reset of Engineered Safety Features (B-24)
VI-7.A.3	ECCS Actuation System
VI-7.B	ESF Switchover from Injection to Recirculation
VI-7.C.2	Failure Mode Analysis-ECCS
VI-7.D	Long Term Cooling Passive Failures (e.g., flooding)
VI-10.A	Testing of Reactor Protection Systems
VII-1.A	Reactor Trip System Isolation
VII-3	Systems Required for Safe Shutdown
VIII-2	Onsite Emergency Power Systems
VIII-3	Emergency dc Power Systems
VIII-4	Electrical Penetrations
IX-6	Fire Protection

The conclusion that suitable isolation devices are provided is a basic assumption for Topics VI-7.C.2 and VII-3.

IV. REVIEW GUIDELINES

The review guidelines are presented in Section 2 of Report 1200F, "Independence of Redundant Onsite Power Systems."

V. EVALUATION

As noted in Report 1200F, "Independence of Redundant Onsite Power Systems," there are several areas in which the separation between redundant systems is compromised by the onsite power system.

The review of docketed information and plant electrical drawings indicates that the Oyster Creek Unit 1 onsite ac emergency redundant power sources and distribution system do not meet the current licensing requirements for independence of onsite power systems because the ac system has seven automatic transfers of loads/load groups between redundant sources. The 120 V dc system has three automatic transfers of power between redundant sources, which are not in compliance with current licensing criteria for independence of onsite power systems.

VI. CONCLUSION

As a result of our review of our contractor's work the staff concludes that the subject ac and dc transfers should be removed, or the design of the transfer circuits should be shown to satisfy all of the requirements of IEEE Std 279-1971.