



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

50-390

October 26, 1998

Mr. Louis F. Liberatori Jr., Chairman  
Westinghouse Owners Group  
Consolidated Edison Co. of NY, Inc.  
Indian Point Unit 2  
Broadway and Bleakley Avenue  
Buchanan, NY 10511

SUBJECT: REVIEW OF WESTINGHOUSE OWNERS GROUP TOPICAL REPORTS  
WCAP-13877 REVISION 1, WCAP-14129 REVISION 1, AND WCAP-13900,  
REVISION O, "ESFAS SUBGROUP RELAY TEST INTERVAL EXTENSION"

Dear Mr. Liberatori:

The NRC staff has completed its review of the subject topical reports prepared by Westinghouse Electric Corporation for the Westinghouse Owners Group. The enclosure provides the staff's safety evaluation report (SER) approving these topical reports for reference in plant specific license amendment requests. The topical reports describe the Westinghouse Owners Group Program MUHP-7040 Revision O, which was completed as an industry effort to demonstrate the acceptability of engineered safety feature actuation system (ESFAS) subgroup relay test interval extension.

The enclosed SER was prepared by the Division of Reactor Controls and Human Factors and accepts topical reports WCAP-13877, "Reliability Assessment of Westinghouse Type AR Series Relays," Revision 1, dated August 1998 (proprietary version), WCAP-14129, Revision 1, dated August 1998 (non-proprietary version), and WCAP-13900, "Extension of Slave Relay Surveillance Test Intervals," dated April 1994, for the Type AR relays. The Potter & Brumfield (P&B) MDR relays included in WCAP-13900 have been previously accepted by the staff in a separate SER dated May 31, 1996.

WCAP-13877, Rev. 1, describes the Westinghouse analyses that justify extending surveillance intervals for the ESFAS Westinghouse Type AR relays. The NRC staff finds that data and analyses presented in WCAP-13877, Rev. 1, support the proposed refueling interval staggered test for ESFAS Westinghouse Type AR relays as proposed in WCAP-13900. However, as stated in the staff's SER, if two or more Westinghouse Type AR ESFAS subgroup relays fail in a 12-month period, the referencing licensee should reevaluate the adequacy of the extended surveillance interval. The reevaluation should consider the design, maintenance, and testing of all Westinghouse Type AR ESFAS subgroup relays. If the licensee determines that the interval is inadequate for detecting a single relay failure, the interval should be decreased and should be such that the licensee can detect an ESFAS subgroup relay failure prior to the occurrence of a second failure.

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Additionally, plants that use Westinghouse Type AR relays for ESFAS subgroup relay applications and are proposing test interval extensions based on WCAP-13877, Rev. 1 and WCAP-13900, Rev. 0 should also:

1. Confirm the applicability of the WCAP-13877, analyses to their plant.
2. Ensure that the contact loading analysis for Type AR relays has been performed to determine the acceptability of these relays.
3. Determine the qualified life for the Type AR relays based on plant specific environmental conditions.
4. Establish a program to evaluate the adequacy of the proposed test interval if two or more AR relays fail in a 12-month period.

Should you have any questions or wish further clarifications please call Hukam Garg at (301) 415-2929.

Sincerely,



Thomas H. Essig, Acting Chief  
Generic Issues and Environmental Project Branch  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

Enclosure: As stated

cc: See attached

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