



Westinghouse
Electric Corporation

Water Reactor
Divisions

Nuclear Technology Division
Box 355
Pittsburgh Pennsylvania 15230

March 22, 1985

NS-NRC-85-3024

Mr. James M. Taylor, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Possible Undetectable Failures in
Engineered Safety Features Actuation Systems

References: (1) NS-TMA-2150, Anderson to Stello, November 7, 1979
(2) NS-TMA-2189, Anderson to Stello, January 4, 1980
(3) NS-TMA-2204, Anderson to Stello, February 15, 1980

Dear Mr. Taylor:

This is to confirm our telephone report on March 21, 1985 to Mr. G. Lanik of your office concerning an item involving the possibility for certain failures in engineered safety features actuation systems to go undetected.

Reference (1) originally reported the subject deficiency under 10 CFR Part 21 and 10 CFR 50.55(e). References (2) and (3) informed the NRC of corrective measures which were recommended by Westinghouse at that time. These measures consisted of special plant specific tests to make previously undetectable failures of the P-4 Permissive detectable.

The P-4 Permissive is provided by electrical contacts in the reactor trip breakers. When the breaker is open (reactor tripped), P-4 permits the operator to block actuation of the Safety Injection System and to enter the the recirculation mode. The design did not provide for on-line testing of the P-4 contacts and failure of those contacts to perform properly was undetectable. The recommended tests resolved this by entering the switchgear cabinets and using a meter to measure the condition of the P-4 contacts.

The NRC and several utilities requested Westinghouse to give consideration to a hardware change to permit verification of P-4 without the need to enter the switchgear cabinets with portable test equipment. A change was developed and offered by Westinghouse as an option. This change consisted of mounting a meter and a multiposition switch on each cabinet door. It was accepted for use on fifteen plants then in various stages of construction.

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It was determined on March 12, 1985, after evaluating an earlier identified concern as to the overall effectiveness of the change, that the possibility of undetectable failures remained under certain circumstances. The safety implications of the remaining possible undetectable failures are essentially the same as those reported in 1979, and are reportable under 10 CFR Part 21 and 10 CFR 50.55(e).

Not all of the plants for which the change was accepted are affected. The following are the affected plants:

Operating Plants

Callaway
Wolf Creek

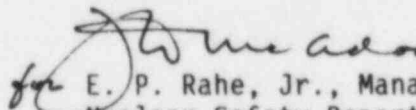
Plants Under Construction

Comanche Peak Units 1 and 2
Marble Hill Units 1 and 2 (Construction Suspended)
Seabrook Units 1 and 2
Shearon Harris
Vogtle Units 1 and 2

Affected customers have been advised to revert to the previously recommended test procedures which are contained in Reference 3 above. A copy of Reference 3 is attached for your convenience.

Please direct any questions you may have to Mr. Clarence Draughon, the cognizant Nuclear Safety staff manager. He may be reached at (412) 374-5761.

Very truly yours,


for E. P. Rahe, Jr., Manager
Nuclear Safety Department

cc: Mr. I. Villalva, NRC OI&E
Mr. C. E. Rossi, NRC OI&E
Mr. G. F. Lanik, NRC OI&E