

November 23, 1984

PDR 016

Docket Nos. 50-338
and 50-339

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Mr. W. L. Stewart
Vice President - Nuclear Operation
Virginia Electric Power Company
Post Office Box 26666
Richmond, Virginia 23261

Dear Mr. Stewart:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - GENERIC LETTER 83-28,
PREVENTATIVE MAINTENANCE PROGRAM FOR REACTOR TRIP BREAKERS-
MAINTENANCE AND TRENDING - NORTH ANNA UNITS NO. 1 AND NO. 2

The technical review of Items 4.2.1 and 4.2.2 as stated in Generic Letter 83-28 is being performed by the Idaho National Engineering Laboratory (INEL). Based on that review we find the enclosed request for additional information must be addressed before we can complete our review.

The above actions are backlog items and therefore need to be addressed promptly in order to complete these actions prior to June 30, 1985. You have been advised of the backlog status assigned to NA 1 & 2 by separate letter. Therefore, we request that the additional information be submitted for our review within 30 days of receipt of this letter.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

James R. Miller, Chief
Operating Reactors Branch No. 3
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Enclosure:
As stated

cc w/enclosure:
See next page

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NORTH ANNA UNITS 1 AND 2
REQUEST FOR ADDITIONAL INFORMATION
GL 83-28, ITEMS 4.2.1 AND 4.2.2, TASK A6814

INTRODUCTION

Virginia Electric and Power Company, the licensee for North Anna Units 1 and 2, submitted their response to Generic Letter 83-28 on November 4, 1983. That submittal has been reviewed with respect to Items 4.2.1 and 4.2.2 of the Generic Letter. The licensee's response was not sufficiently detailed to permit an evaluation of the adequacy of the periodic maintenance and trending programs for the breakers. The following additional information is required to evaluate compliance with Items 4.2.1 and 4.2.2.

1. Item 4.2.1 - Periodic Maintenance Program for Reactor Trip Breakers.

- 1.1 Criteria for Evaluating Compliance with Item 4.2.1

The North Anna Units 1 and 2 Reactor Trip Systems utilize Westinghouse DB-50 circuit breakers. The primary criteria for an acceptable maintenance program for this breaker are contained in Maintenance Program for DB-50 Reactor Trip Switchgear, Rev. 0, dated October 14, 1983, by Westinghouse. The NRC Staff, Equipment Qualification Branch, has reviewed and endorsed the Westinghouse Maintenance Program for DB-50 Switchgear. Specifically, the criteria used to evaluate compliance include those items in the Westinghouse program that relate to the safety function of the breaker, supplemented by those measures that must be taken to accumulate data for trending.

- 1.2 Issues Relating to Item 4.2.1

The licensee response states that preventive maintenance procedures for the breakers are in place and performed during each refueling outage. Those procedures were not included in the submittal. The response also states that the licensee expects to complete review and revision of the procedure by April, 1984.

Does the North Anna Units 1 and 2 periodic maintenance program for the reactor trip breakers include, on a six month basis:

1. Verification of trip bar freedom;
2. Verification of operating mechanism alignment and freedom, using the procedure identified in the Westinghouse program;

3. Retaining ring verification, 33 places;
4. Verification of nut and bolt tightness;
5. Verification of pole bases physical condition;
6. Verification of arcing and main contacts physical condition, using the procedure identified in the Westinghouse program;
7. Verification of insulating link's physical condition;
8. Verification of wiring insulation and termination physical condition;
9. Verification of arc chute physical condition;
10. Verification of breaker cleanliness;
11. Undervoltage Trip Attachment (UVTA) dropout voltage test and lubrication, using the procedure identified in the Westinghouse program;
12. Shunt Trip Attachment (STA) operation verification;
13. Verification of operation of auxiliary switches;
14. Inspection of positioning lever condition, using the procedure identified in Westinghouse program;
15. Functional test of the breaker prior to returning it to service, using the procedure identified in the Westinghouse program.

Does the North Anna Units 1 and 2 periodic maintenance program for the reactor trip breakers include, on a refueling interval basis:

1. Verification of cell interlock operation;
2. Examination and cleaning of breaker enclosure;
3. Measurement of trip force required, using the procedure identified in the Westinghouse program;
4. Breaker response time for undervoltage trip;
5. Functional test of the breaker prior to returning it to service, using the procedure identified in the Westinghouse program.

The licensee is to confirm that the periodic maintenance program includes these 20 items at the specified intervals or commit to their inclusion.

2. Item 4.2.2 - Trending of Reactor Trip Breaker Parameters to Forecast Degradation of Operability.

2.1 Criteria for Evaluating Compliance with Items 4.2.2

Four parameters have been identified as trendable and are included in the criteria for evaluation. These are (1) undervoltage trip attachment dropout voltage, (2) trip force, (3) breaker response time for undervoltage trip, and (4) breaker insulation resistance.

2.2 Issues Relating to Item 4.2.2

The licensee submittal states that a "time response measuring device" for the reactor trip breaker will be evaluated in 1984, and, if acceptable, will be considered for incorporation into the maintenance program; the response, however, neither described the licensee's trending program nor identified those parameters which are being trended.

The licensee is to commit to inclusion of trip force, breaker response time and dropout voltage for undervoltage trip and breaker insulation resistance as trending parameters. The licensee should also identify the organization which will perform trend analysis, how often the analysis will be performed and how the information derived from the analysis will be used to affect periodic maintenance.