

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

January 16, 1992

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Serial No. 91-765
NAPS/WCH
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
INSPECTION REPORT NOS. 50-338/91-17 AND 50-339/91-17
RESPONSE TO THE NOTICES OF VIOLATION

We have reviewed your letter of December 18, 1991, which referred to the inspection conducted at North Anna from July 29, 1991, through August 30, 1991, and reported in Inspection Report Nos. 50-338/91-17 and 50-339/91-17. These results were also discussed in a meeting held in your Atlanta office on December 12, 1991. Our response to the Notices of Violation is attached.

In your letter that transmitted the Notices of Violation, you expressed concern regarding the violations because they demonstrated examples where procedures were inadequate, procedures were not followed, and corrective action for identified deficiencies was inadequate to preclude recurrence. To address the issue of inadequate procedures, each case was reviewed and procedures were revised accordingly. Where procedures were not adequately implemented, the events were discussed with the appropriate personnel and attention to detail was stressed. A Technical Specification (TS) change associated with the under voltage/degraded voltage (UV/DV) setpoints was submitted to the NRC to preclude further confusion of station personnel. The TS change was approved by the NRC on November 29, 1991.

To address the issue regarding procedures that were not followed (i.e., deviation reports (DR) not being submitted when conditions exceeded TS allowed values), management met with all members of the electrical department and stressed the expectations for submitting DRs. The Superintendent of Maintenance issued a Standing Order to all Maintenance Department personnel reinforcing the requirement to submit a DR when unexpected conditions are encountered. In addition, DR training was conducted as part of the Technical Staff Continuing Training (TSCT) Program.

Regarding inadequate corrective action, the example of the EDG load sequencing timer drift which was identified on August 7, 1989, and again on Unit 1 in 1991 was evaluated and was determined not to be an operability concern. Since the time of the 1989 event, a new Virginia Power Administrative Procedure (VPAP-1601) has been implemented which would have required the cause of the deviation to be determined and appropriate corrective measures to be taken, for events of this nature.

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Finally, in regard to your request in the EDSFI cover letter concerning review of the DBD program in light of the EDSFI findings, we are assessing the issue and will respond in detail when we submit our response to the 23 findings.

if you have any further questions, please contact us.

Very truly yours,



L. Stewart
Senior Vice President - Nuclear

Attachment

cc: U. S. Nuclear Regulatory Commission
101 Marietta Street, N.W.
Suite 2900
Atlanta, Georgia 30323

Mr. M. S. Lesser
NRC Senior Resident Inspector
North Anna Power Station

**RESPONSE TO THE NOTICES OF VIOLATION
REPORTED DURING THE NRC INSPECTION CONDUCTED
BETWEEN JULY 29, 1991, AND AUGUST 30, 1991,
INSPECTION REPORT NOS. 50-338/91-17 AND 50-339/91-17**

NRC COMMENT

During an NRC inspection conducted between the period of July 29, 1991, and August 30, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, (1991), the violations are listed below:

- A. Technical Specification (TS) 6.8.1.c requires that procedures be established and implemented for surveillance and test activities of safety related equipment. Surveillance procedures 1/2-PT-36.11 were established to demonstrate per TS 4.3.2.1.1 and 4.3.2.1.3 that the degraded voltage time delay times and loss of voltage instrumentation response times were within the values provided in TS Tables 3.3-4 and 3.3-5 respectively. Test Procedure EMP-P-RT-206 and associated Protection Scheme Whitesheets were established to demonstrate per TS 4.3.2.1.1 that the loss of voltage time delay times were within the values provided in TS Table 3.3-4. Surveillance procedure 2-PT-84.4 was established to demonstrate per TS 4.8.2.5.1.3 that a representative sample of fuses meet the manufacturer's design criteria.

Contrary to the above, procedures for surveillance and test activities were not adequately established or implemented in that:

1. 1/2-PT-36.11 were not adequately established in that the TS Table 3.3-4 required degraded voltage time delay tolerance band of plus or minus three seconds was not specified. On October 29, 1990, this resulted in the 2J emergency bus time being left set outside the tolerance band.
2. On August 14, 1991, 1/2-PT-36.11 were not adequately established in that the 74 percent loss of voltage relay circuitry had been included in the response time test in lieu of the 72 percent loss of voltage relay circuitry as required by TS.
3. EMP-P-RT-206 and Protection Scheme Whitesheets were not adequately established in that the procedures specified a loss of voltage time delay setpoint of 2.0 seconds which was outside the 2.2 plus or minus 0.03 seconds required by TS Table 3.3-4. This resulted in all four setpoints being found out of tolerance on August 13, 1991.
4. 2-PT-84.4 was not implemented in that on September 4, 1990, the procedure was signed as being completed satisfactorily even though five fuses were outside the stated acceptance criteria.

This is a Severity Level IV violation (Supplement I).

- B. 10 CFR 50 Appendix B Criterion V requires activities affecting quality be prescribed by documented procedures and shall be accomplished in accordance with these procedures. Administrative procedure VPAP-1501 attachment 3 item 1.d stated that deviation reports would be required for any conditions that exceed TS allowed values, including drift in trip setpoints.

Contrary to the above, deviation reports were not issued as required by VPAP-1501 when Unit 1 load sequencing timers were discovered outside their TS Table 4.8-1 required setpoint tolerances. Out of tolerance conditions were identified on January 15, 1991, January 16, 1991, and February 4, 1991, during the performance of PT-83.3, Emergency Diesel Load Sequencing Timer Verification Test, revision 3.

This is a Severity Level IV violation (Supplement I)

- C. 10 CFR 50 Appendix B Criterion XVI requires that significant condition adverse to quality, measures shall assure that the cause of the condition is determined and corrective actions are taken to preclude repetition. Station Deviation Report (DR) 89-1586 identified that Unit 2 TS required load sequencing timers were found with their setpoints outside allowable TS Table 4.8-1 tolerance.

Contrary to the above, measures were not taken to determine the cause of the condition and preclude repetition. This condition, EDG load sequencing timer drift, which was identified on Unit 2 in August 7, 1989, was subsequently identified on Unit 1 in 1991.

This is a Severity Level IV violation (Supplement I).

RESPONSE TO VIOLATION A

1. ADMISSION OR DENIAL OF THE ALLEGED VIOLATIONS

The violation is correct as stated.

2. REASON FOR THE VIOLATIONS

The violation associated with procedures for surveillance and test activities not being adequately established or implemented was caused by several instances of personnel error.

1. Personnel error associated with inadequate procedures led to the 90 percent degraded voltage relay for the Unit 2 "J" bus being left with its time delay setting outside the TS requirement. It is station policy to include TS surveillance requirements in the procedure's acceptance criteria; however, the time delay requirement was not included in this case. Station personnel did not recognize that the setpoint was outside the requirement because it was not addressed in the procedure's acceptance criteria.
- 2&3. Personnel error associated with an incorrect interpretation of TS resulted in relay setpoints more conservative than the TS limits and failure to perform response time testing of the 72% under voltage (UV) relays. It is suspected that the 72% UV relay setpoints were adjusted to 2.0 seconds based on the interpretation that the TS required time delay was intended to be the overall circuit response time between the initiating signal from the 72% UV relay and initiation of the EDG start. It has since been determined that this is an incorrect interpretation because the TS setpoint requirement is for the relay time delay only.

The test procedures used to verify the setpoints for the relay timers were an additional contributing factor to the event. Since the test procedures used to calibrate the setpoint of the timers were not part of the Periodic Testing (PT) Program, a TS cross reference to alert the user or reviewer that the acceptance criteria was associated with a TS requirement was not provided. Therefore, the relay time response test was not incorporated into the PT Program as a TS surveillance and the setpoint verification test did not contain the appropriate acceptance criteria.

In order to time the UV circuitry as required by TS 3.3.2.1, the 74% UV circuit was timed because this is the first and primary circuit that starts the EDG. The 72% UV circuitry is required to function to load the EDG, and this circuit is functionally tested in accordance with TS every other month during the degraded voltage/loss of voltage functional test. However, the voltage value specified in the TS equates to the 72% UV relays which were not response time tested.

4. Personnel error due to inattention to detail led to five fuses for pressurizer heater electrical containment penetrations not being replaced and retested prior to unit operation as required by TS. The individuals performing the test failed to recognize that the resistance data was outside the procedure's acceptance criteria. An additional point of consideration for the event was that the acceptance criteria for the subject fuses is listed in a separate section of the procedure from the as found data sheets.

3. CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

Upon discovery of the degraded conditions, equipment was reset and retested in accordance with TS. Where procedural inadequacies were identified, procedure revisions were processed. Licensee Event Report (LER) N2-91-005 was submitted to document relay time delay setpoints outside TS limits. LER N1/2-91-018 was submitted to document the failure to perform response time testing on the 72 percent under voltage relays and time delay setpoints found outside the TS limits. LER N2-91-008 was submitted for the failure to replace fuses with resistance measurements outside the acceptance criteria. All events were discussed with appropriate departments and personnel involved and strict compliance with TS was emphasized.

As an additional enhancement, a Technical Specification change which clarifies under voltage setpoints and time delay requirements was processed and submitted to the NRC. The TS change was approved by the Commission on November 29, 1991.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

No further action is required.

5. THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved.

RESPONSE TO VIOLATION B**1. ADMISSION OR DENIAL OF THE ALLEGED VIOLATIONS**

The violation is correct as stated.

2. REASON FOR THE VIOLATIONS

The violation associated with failure to submit Deviation Reports when load sequencing timers were discovered outside their TS required setpoint tolerances was caused by personnel error. The personnel performing the "as found" testing were not sensitive to submitting DRs when degraded conditions were identified.

3. CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

Upon discovery of the degraded conditions, the EDG load sequencing timer setpoints were reset in accordance with TS limits. The importance of following established administrative requirements, in particular, the requirements for submitting station deviation reports (VPAP-1501), has been discussed and re-emphasized with the appropriate station personnel as documented in our response to NOV 50-338,339/91-14. The Superintendent of Maintenance issued a Standing Order to all Maintenance Department personnel re-enforcing the requirement to submit a DR when unexpected conditions are encountered. In addition, DR training was conducted as part of the Technical Staff Continuing Training (TSCT) Program.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

No further action is required.

5. THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved.

RESPONSE TO VIOLATION C**1. ADMISSION OR DENIAL OF THE ALLEGED VIOLATIONS**

The violation is correct as stated.

2. REASON FOR THE VIOLATIONS

The violation associated with failure to take corrective measures to determine the cause of load sequencing timers being outside allowable tolerance was caused by personnel error resulting from an inadequate administrative procedure. The DR was submitted because a load sequencing timer verification test procedure did not provide for documentation of corrective actions if any were required. The response to the DR addressed the procedure problem and successfully adjusted the time response to within TS requirements.

3. CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

To address the issue of measures not being taken to determine the cause of the 1989 DR that was identified in your letter, an evaluation was performed which determined that there was not an operability concern. Since the time of the event, a new Virginia Power Administrative Procedure (VPAP-1601 "Corrective Action") has been implemented. This program provides a more rigorous review of plant deviations to ensure causes are identified and appropriate corrective measures are taken.

The probable cause of the timers being outside the TS tolerance limit is normal instrument drift; however, this could not be verified when the unit was at power. Unit 1 is currently shutdown, and an additional timer has been found outside the TS requirement. As required by VPAP-1501, a DR was submitted, and VPAP-1601 will ensure the cause is identified and corrective measures are taken. In order to ensure no other timers are outside of their tolerance limit, the Emergency Diesel Load Sequencing Timer Verification Test will be performed during the current Unit 1 outage.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

No further action is required.

5. THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved.