

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

July 7, 1988

D. S. CRUDEN
VICE PRESIDENT-NUCLEAR

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

Serial No. 88-375
NO/GDM:pms
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

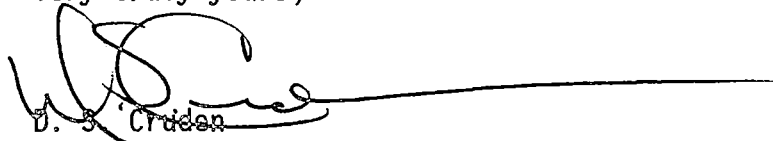
VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
NRC INSPECTION REPORT NOS. 50-280/88-11 AND 50-281/88-11

We have reviewed your letter of June 7, 1988 in reference to the inspection conducted at Surry Power Station on March 28 - April 1 and April 11-15, 1988 and reported in Inspection Report Nos. 50-280/88-11 and 50-281/88-11. Our response to the violations described in the Notice of Violation is provided in the attachment.

We have no objection to this inspection report being made a matter of public disclosure.

If you have any further questions, please contact us.

Very truly yours,


D. S. Cruden

Attachment

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

Mr. W. E. Holland
NRC Senior Resident Inspector

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RESPONSE TO THE NOTICE OF VIOLATION
ITEMS REPORTED DURING NRC INSPECTION
CONDUCTED ON MARCH 28 - APRIL 1 AND APRIL 11-15, 1988
INSPECTION REPORT NOS. 50-280/88-11 AND 50-281/88-11

During the Nuclear Regulatory Commission (NRC) inspection conducted on March 28 - April 1 and April 11-15, 1988, 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 (1988), the violations are listed below:

- A. 10 CFR 50 Appendix E requires that each applicant for an operating license include in the Final Safety Analysis Report plans for coping with emergencies. The licensee's Emergency Plan, Table 4.1A, states an intentional reduction in power, load, or temperature because the unit has entered a Technical Specification Action Statement or will exceed a Limiting Condition for Operation is an initiating condition for a Notification of Unusual Event.

Contrary to the above, on March 5, 1988, the Emergency Plan was not adequately implemented, in that the licensee declared a Notification of Unusual Event (NOUE) at 0307 and terminate it at 0432, when in fact, the condition causing the NOUE still existed. This condition involved inoperability of the B and D control rod banks. This condition was not corrected until successful testing of both control rods banks was completed at 0548.

This is a Severity Level IV violation (Supplement 1).

- B. Technical Specification 3.12.C.3 states that if more than one rod assembly in a given bank is out of service because of a single failure external to the individual rod drive mechanism, (i.e programming circuitry), the provisions of Specifications 3.12.C.1 and 3.12.C.2 shall not apply and the reactor may remain critical for a period not to exceed two hours provided immediate attention is directed toward making the necessary repairs. In the event the affected assemblies cannot be returned to service within this specified period the reactor will be brought to hot shutdown conditions.

Contrary to the above, on March 5, 1988, Unit 2 remained critical from 0302 until 0530 with either control rod bank B or D or a combination of both banks inoperable due to a defective phase control card in the 1BD power cabinet. This event initiated at 0102 when a control rod urgent failure alarm was received.

This is a Severity Level IV violation (Supplement 1).

RESPONSE TO NOTICE OF VIOLATION
INSPECTION REPORT NOS. 50-280/88-11 AND 50-281/88-11

ITEM A

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION:

The violation is correct as stated.

REASONS FOR VIOLATION:

The cause was due to a misinterpretation of Technical Specifications. Control bank D is the only bank of control rods that is used to control reactor power when critical. Control bank B is normally fully withdrawn and is used to shut down the reactor. At all times, during this event, this bank was capable of being inserted into the core upon receipt of a reactor trip signal. The failed phase control card in the 1BD cabinet controls the operation of control bank B rods. When this card was replaced, control bank D was successfully tested. Since the movement of this bank is used to control reactor power and temperature, it was determined that the condition that caused the notification of unusual event had been corrected. Subsequent testing of control bank B yielded a second random failure of the same circuit card. The emergency plan was correctly entered when a reduction in power was initiated in accordance with T.S. 3.12.C.3. It was exited on the belief that the control bank D problem had been corrected and that control bank B was operable because it could still perform its intended shutdown function.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

Additional review of actions surrounding the entrance to and exit from Technical Specification LCOs is being performed. Shift Technical Advisors (STA) review station deviations and are notified by the shift supervisors of any emergency plan implementation. The STAs report to the Assistant Station Manager - Nuclear Safety and Licensing. This constitutes an immediate independent review of operational events and should provide additional guidance on Technical Specification interpretations.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS:

The requirement for SROs to adequately assess and test components prior to declaring the component operable will be reinforced by issuing written guidance to SROs.

THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance will be achieved by July 31, 1988.

RESPONSE TO NOTICE OF VIOLATION
INSPECTION REPORT NOS. 50-280/88-11 AND 50-281/88-11

ITEM B

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION:

The violation is correct, in that a continuous reduction of reactor power was not maintained for the entire period from expiration of the two hour allowance at 0302 until the successful testing of both control rod banks B and D at 0530. We believe the intent of this Technical Specification is to allow two hours of full power operation while attempting to correct the problem associated with rod control circuitry and then, if unsuccessful, to require the initiation of an orderly reactor shutdown. Otherwise, a reading of this specification to require the unit to be shutdown at the end of the two hour time period would not allow time for problem resolution, and would necessitate a reactor trip.

REASONS FOR VIOLATION:

In addition to the reason noted in our response to Item A, the specific requirements associated with the implementation of the unit shutdown were not clear. Several Surry Technical Specifications contain a requirement to shutdown the reactor if an out-of-service time allowance is exceeded, but do not specify a time to reach hot shutdown. Other Technical Specifications do not explicitly require a shutdown upon expiration of the out-of-service time allowance. In these cases, the time limits of T.S. 3.0.1 (six hours to hot shutdown) are invoked. Station practice has been to immediately initiate a ramp in those cases where an explicit shutdown requirement was included, and to use the six hour time period of T.S. 3.0.1 as guidance for the maximum allowable duration of the power reduction. In this case, which was complicated by the requirement to perform a power reduction without rod control, turbine and reactor power were reduced from 0302 to 0409. At 0409, the ramp was stopped in order to test the control rods following replacement of the failed card. Following successful testing of control bank D, it was determined that the condition that caused the urgent failure alarm had been corrected, and that the requirements of T.S. 3.12.C.3 had been satisfied.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

The event was included as part of operations required reading. Additional review of actions surrounding the entrance into and exit from Technical Specification LCOs is being performed by the Shift Technical Advisor (STA) concurrent with shift activities during the event. Shift Supervisors are now required to inform the STA of any emergency plan implementation. The STAs review of operational events will provide additional guidance on Technical Specification interpretations. The STAs report to the Assistant Station Manager, Nuclear Safety Licensing, and are therefore in a position to provide independent review of Technical Specification interpretations.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS:

Written guidance is being developed to reinforce the requirement for SROs to adequately assess and test a component prior to declaring a component operable.

In addition, Surry Technical Specifications will be reviewed, and in those cases where currently a reactor shutdown is required upon expiration of an out-of-service time allowance, revisions to specify time requirements will be proposed.

THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance has been achieved. The written guidance will be provided to the shift by July 31, 1988.