

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

February 25, 1998

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 98-068
SPS/BCB/GDM R4.0
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
REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION REPORT NOS. 50-280/97-12, 50-281/97-12

We have reviewed Inspection Report Nos. 50-280/97-12 and 50-281/97-12 dated January 26, 1998, and the enclosed Notices of Violation (NOVs) for Surry Units 1 and 2. We have investigated these NOVs through our Root Cause Evaluation program and have taken or initiated comprehensive corrective actions. As described in the attached reply, the corrective actions are designed to address the specific violations and to preclude the recurrence of similar violations. Although we believe that these violations do not represent broader concerns, we are carefully monitoring human performance to ensure any adverse trends are promptly identified and corrected.

We have no objection to this letter being made a part of the public record. Please contact us if you have any questions or require additional information.

Very truly yours,



James P. O'Hanlon
Senior Vice President - Nuclear

Attachment

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Q PDR



cc: U. S. Nuclear Regulatory Commission
Region II
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Mr. R. A. Musser
NRC Senior Resident Inspector
Surry Power Station

SUMMARY OF COMMITMENTS

The following commitments are being made in response to the Notice of Violation in NRC Inspection Report Nos. 50-280/97-12 and 50-281/97-12.

1. The Training Department is incorporating the lessons learned from this violation into the appropriate operator training programs.
2. Operations Department management is developing a plan to improve pre-job briefings to ensure that the proper questioning attitude is present during the performance of work activities.
3. The responsibilities and expectations regarding the supervision of an operator trainee will be further reinforced through the licensed and non-licensed operator requalification programs.
4. A case study of this event will be performed with appropriate Maintenance personnel to examine and communicate how the lack of procedure ownership led to the procedural compliance failure.
5. Additional training regarding turbine governor maintenance will be provided to Mechanical Maintenance supervisors. This training will specifically address adjustment of turbine governor compensation.
6. O-MCM-1403-01 will be revised to divide Subsection 6.12 into smaller, more logical units of work.
7. The PMT matrix will be revised to more clearly specify the PMT requirement for adjusting turbine governor compensation.

REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION CONDUCTED NOVEMBER 16 - DECEMBER 27, 1997
SURRY POWER STATION UNITS 1 AND 2
INSPECTION REPORT NOS. 50-280/97-12 AND 50-281/97-12

NRC COMMENT:

"During an NRC inspection conducted from November 16 through December 27, 1997, violations of NRC requirements were identified. In accordance with the 'General Statement of Policy and Procedures for NRC Enforcement Actions,' NUREG 1600, the violations are listed below:

- A. Technical Specification 6.4.A.7 requires that detailed written procedures with appropriate check-off lists and instructions be provided for preventive or corrective maintenance operations which would have an effect on the safety of the reactor.

Procedure 0-MOP-AAC-002, 'Return to Service of the AAC Diesel Generator,' Revision 3, and Tagout SO-97-AAC-006 provided instructions to return the Alternate Alternating Current (AAC) Diesel Generator to service following the completion of maintenance activities on November 26, 1997.

Contrary to the above, as of November 26, 1997, Procedure 0-MOP-AAC-002 and tagout SO-97-AAC-006 did not provide appropriate instructions to return the AAC Diesel Generator to service following maintenance activities, in that, they did not require breaker control switches 0-AAC-1-05M3, 0-AAC-1-05L2, 0-AAC-1-05L3, 0-AAC-1-05L1, 0-AAC-1-05M1 and 0-AAC-1-04M1-2 be returned to the Auto-after-Trip position. The mispositioned switches resulted in the AAC Diesel Generator being unable to automatically connect to the station electrical busses for a period of approximately 36 hours after the AAC Diesel Generator was returned to service.

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

- B. Technical Specification 6.4.A.1 requires that detailed written procedures with appropriate check-off lists and instructions be provided for normal operation of the unit, and of all systems and components involving nuclear safety of the station. Technical Specification 6.4.D requires that all procedures described in Technical Specification 6.4.A be followed.

Operations Procedure 'Outside Log,' Revision 35, Step 5 required that AAC Diesel Generator breaker control switches 0-AAC-1-05M3, 0-AAC-1-05L2, 0-AAC-1-05L3, 0-AAC-1-05L1, and 0-AAC-1-05M1 be verified in the Auto-after-Trip position.

Contrary to the above, on November 27, 1997, Operations Procedure 'Outside Log' Step 5 was not followed, in that, the operator performing the procedure did not identify that the switches were actually in the Pull-to-Lock position. The incorrect switch positions were not identified until November 28, during the performance of a scheduled quarterly test of the AAC Diesel Generator.

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

- C. Technical Specification 6.4.A.7 requires that detailed written procedures with appropriate check-off lists and instructions be provided for preventive or corrective maintenance operations which would have an effect on the safety of the reactor. Technical Specification 6.4.D requires that all procedures described in Technical Specification 6.4.A be followed.

Work Order 00310109-01 and Procedure 0-MCM-1403-01, 'Terry Turbine Overhaul, 1-FW-T-2 and 2-FW-T-2,' Revision 8, provided written procedures for the replacement of the Unit 2 Turbine Driven Auxiliary Feedwater Pump Governor. The Post Modification Testing Requirements of Work Order 00310109-01 specified that the Governor Post-Maintenance and Operational Checks listed in Section 6.12 of Procedure 0-MCM-1403-01 be performed.

Contrary to the above, on October 20, 1997, written procedures were not followed, in that, Governor Post-Maintenance and Operational Checks listed in Section 6.12 of Procedure 0-MCM-1403-01 were not performed.

This is a Severity Level IV Violation (Supplement I)."

REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION CONDUCTED NOVEMBER 16 - DECEMBER 27, 1997
SURRY POWER STATION UNITS 1 AND 2
INSPECTION REPORT NOS. 50-280/97-12 AND 50-281/97-12

Violation A

1. Reason for the Violation, or, if Contested, the Basis for Disputing the Violation

The violation is correct as stated and was caused by inappropriate reliance on an informal tagging record note in lieu of specific procedural instructions or specific tagging record line entries for returning the Alternate Alternating Current (AAC) Diesel Generator to service following maintenance.

During the preparation of Tagging Record (S)0-97-AAC-0006, a Senior Reactor Operator recognized the need to return the AAC Diesel Generator breaker control switches to the Auto-after-Trip position following the completion of the maintenance activity. Since Maintenance Operating Procedure 0-MOP-AAC-002, "Return to Service of the AAC Diesel Generator," did not include a step to perform this action (i.e., was not developed to perform this type of action following testing), a note was added to the tagging record to ensure that the breaker control switches were left in the Auto-after-Trip position.

Although notes are commonly added to tagging records to provide additional information or clarification, the use of a note on Tagging Record (S)0-97-AAC-0006 was not an appropriate method for controlling the configuration of the subject breaker control switches. Specifically, the note did not provide enough detailed instructions to ensure the successful completion of the action and was not discussed during the pre-job briefing. In addition, the use of an instructional note in lieu of changing the procedure was not questioned by Operations personnel since tagging record notes are commonly used. The appropriate means for controlling the configuration of the AAC Diesel Generator breaker control switches should have been through one of the following two methods: 1) the use of detailed procedural instructions or 2) by adding a specific line entry on the tagging record for each breaker control switch. Either of these methods will ensure the breaker control switches are properly positioned in the same manner that other plant components are controlled (e.g., valve position).

2. Corrective Steps Which Have Been Taken and the Results Achieved

A Deviation Report was submitted to document the deviating condition and to ensure appropriate corrective actions were implemented.

2. Corrective Steps Which Have Been Taken and the Results Achieved (Continued)

The personnel involved in this violation were disciplined.

A Category II Root Cause Evaluation (RCE) was performed to determine the cause of this violation and to recommend corrective actions. The results of the RCE are reflected in this response.

The Operations Department established a policy that requires the configuration of 4160 volt and 480 volt breaker control switches to be controlled by either a procedure or by a component specific line entry on a tagging record. This policy eliminates the use of tagging record notes to specify the position of breaker control switches and ensures positive configuration control.

Maintenance Operating Procedure 0-MOP-AAC-002 was revised to include instructions for aligning breakers and associated control switches when returning the AAC Diesel Generator to service.

3. Corrective Steps Which Will be Taken to Avoid Further Violations

The corrective actions noted in Section 2 above are sufficient to preclude recurrence of this violation. However, the following actions are being taken to further enhance our programs and processes:

- The Training Department is incorporating the lessons learned from this violation into the appropriate operator training programs.
- Operations Department management is developing a plan to improve pre-job briefings to ensure that the proper questioning attitude is present during the performance of work activities.

These additional actions will be completed by December 31, 1998.

4. The Date When Full Compliance Will be Achieved

Full compliance was achieved on February 19, 1998, when the corrective actions described in Section 2 were completed.

Violation B

1. Reason for the Violation, or, if Contested, the Basis for Disputing the Violation

The violation is correct as stated and was caused by the failure of a qualified operator to properly supervise an operator trainee.

An operator trainee performed Operations Procedure, "Outside Log," on November 17, 1997, under the supervision of a qualified operator. The "Outside Log" is a computer-based procedure that is performed using a hand held computer. Although the procedure includes a step to verify that the AAC Diesel Generator breaker control switches are in the Auto-after-Trip position, the trainee did not fully understand the step and failed to perform it satisfactorily. The qualified operator who was supervising the trainee was present, but did not directly observe the performance of the step nor verify its correct completion. As a result, the performance of the "Outside Log" procedure did not identify that the AAC Diesel Generator breaker control switches were mispositioned.

2. Corrective Steps Which Have Been Taken and the Results Achieved

A Deviation Report was submitted to document the deviating condition and to ensure appropriate corrective actions were implemented.

A Category II Root Cause Evaluation (RCE) was performed to determine the cause of this violation and to recommend corrective actions. The results of the RCE are reflected in this response.

The personnel involved in this violation were disciplined.

Operations management communicated the responsibilities and expectations regarding the supervision of an operator trainee to appropriate Operations personnel during shift briefings.

As an enhancement, the "Outside Log" procedure was revised to clarify the instructions for the verification of the AAC Diesel Generator breaker control switches.

3. Corrective Steps Which Will be Taken to Avoid Further Violations

The corrective actions noted in Section 2 above are sufficient to preclude recurrence of the violation. However, as an enhancement, the responsibilities and expectations regarding the supervision of an operator trainee will be further reinforced through the licensed and non-licensed operator requalification programs. This action will be completed by December 31, 1998.

4. The Date When Full Compliance Will be Achieved

Full compliance was achieved on February 17, 1998, when the corrective actions described in Section 2 were completed.

Violation C

1. Reason for the Violation, or, if Contested, the Basis for Disputing the Violation

The violation is correct as stated and was caused by a Maintenance supervisor's misconception regarding his responsibility for performing certain procedural steps. This cause is discussed in more detail below.

Several maintenance activities were performed on the Unit 2 turbine-driven auxiliary feedwater pump (TDAFWP) during the 1997 Unit 2 refueling outage. These activities were implemented by several different work orders (WOs). The post-maintenance testing (PMT) for five of the WO's had overlapping requirements and needed to be performed while the TDAFWP was operating. Therefore, Operations scheduled the PMT for these five WO's to be performed at one time. The WO's were subsequently forwarded to Maintenance to perform the PMT.

The PMT requirements of WO 310109-01, which replaced the turbine governor, specified the performance of Subsection 6.12 of 0-MCM-1403-01, "Terry Turbine Overhaul, 1-FW-T-2 and 2-FW-T-2." Subsection 6.12 of this procedure is comprised of steps that provide instructions for various post-maintenance and operational checks. The activity implemented by WO 310109-01 required that the turbine governor compensation be adjusted (i.e., Steps 6.12.2 through 6.12.10). However, these steps were not performed when the TDAFWP PMT was performed because the responsible Maintenance supervisor believed that the turbine governor compensation adjustment was not a Maintenance Department function. This belief stemmed from the fact that this maintenance activity had been previously performed by the TDAFWP vendor.

2. Corrective Steps Which Have Been Taken and the Results Achieved

A Deviation Report was submitted to document the deviating condition and to ensure appropriate corrective actions were implemented.

The turbine governor was replaced on December 6, 1997, and was satisfactorily tested and returned to service.

The personnel involved in this violation were counseled.

A Category I Root Cause Evaluation (RCE) was performed to determine the cause of this violation and to recommend corrective actions. The actions to be taken as a result of the RCE are addressed in the following section.

3. Corrective Steps Which Will be Taken to Avoid Further Violations

A case study of this event will be performed with appropriate Maintenance personnel to examine and communicate how the lack of procedure ownership led to the procedural compliance failure.

Additional training regarding turbine governor maintenance will be provided to Mechanical Maintenance supervisors. This training will specifically address adjustment of turbine governor compensation.

The corrective actions noted above are sufficient to preclude recurrence of this violation. However, the following actions are being taken to further enhance PMT for the TDAFWPs:

- 0-MCM-1403-01 will be revised to divide Subsection 6.12 into smaller, more logical units of work.
- The PMT matrix will be revised to more clearly specify the PMT requirement for adjusting turbine governor compensation.

These additional actions will be completed by June 1, 1998.

4. The Date When Full Compliance Will be Achieved

Full compliance will be achieved on June 1, 1998, when the corrective actions described in Section 3 are completed.