VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

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

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Docket Nos. 50-280
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License Nos. DPR-32
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Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
PROPOSED TECHNICAL SPECIFICATIONS CHANGES
MAIN CONTROL ROOM AND EMERGENCY SWITCHGEAR ROOM
AIR CONDITIONING SYSTEM

On March 15, 1993 Virginia Electric and Power Company requested changes to the Technical Specifications for Surry Power Station Units 1 and 2. The proposed changes modified the Limiting Conditions for Operation and Action Statements for the Main Control Room and Emergency Switchgear Room Air Conditioning System. Subsequently, an administrative error was identified in the submitted change request. A portion of both the discussion of changes and the significant hazards consideration had been inadvertantly omitted during reproduction of the change package.

As a consequence, the change request is being resubmitted in its entirety. The complete discussion of changes and significant hazards consideration are included in Attachment 1. The proposed Technical Specifications changes are included as Attachment 2.

Should you have any questions or require additional information, please contact us.

Very truly yours,

M. L. Bowling, Manager
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Attachments

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A003

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Attachment 1

Discussion of Changes
Significant Hazards Consideration

Discussion of Changes

Introduction

Surry Power Station initiated a Main Control Room and Emergency Switchgear Room (MCR & ESGR) Air Conditioning System Upgrade Program in 1988. The program includes installing larger capacity Air Handling Units (AHU) and installing additional chiller capacity. After the additional chiller capacity is installed, electrical power modifications are required to the three existing chillers (1-VS-E- 4A, 4B, and 4C) to complete the upgrade program. To complete these final modifications, the existing Technical Specifications must be revised to permit credit being taken for the new chillers in satisfying Technical Specification operability requirements.

Background

The original plant design included two redundant 100% capacity trains of air conditioning with an installed 100% capacity chiller for maintenance. Since initial operation, incremental heat loads have been added to the MCR & ESGR envelope. The net effect of the increased heat loads has been to reduce the capacity of each train of the air conditioning system to less than 100%. Therefore, it became necessary to increase the capacity of the AHUs and the chillers to return the system to the original design capability. To support continued operation, interim modifications were completed on the AHUs and chillers and operating restrictions (Technical Specification requirements) were placed on both the AHUs and the chillers. In addition, a fire watch was required in the ESGRs and Mechanical Equipment Room No. 3 (MER-3) for Appendix R consideration. These interim modifications and operating restrictions ensured adequate heat removal during both normal and accident conditions.

To date, the AHUs have been replaced with larger capacity units which return the air handling capacity of the two trains to 100% capacity. Consequently, the interim operating restrictions on the AHUs have been removed. Returning the air handling capacity to 100% also eliminates the need for a fire watch in the ESGRs. Work on the additional chiller capacity is underway. Thus, the interim operating restrictions and the MER-3 firewatch are still necessary for the chillers.

The three existing chillers (1-VS-E-4A, 4B, and 4C) are required to be operable to provide 100% air conditioning capacity. To ensure that 100% air conditioning capacity will be available during any accident scenario with a Loss of Offsite Power and a

single failure, one of the three chillers has a manual transfer switch that permits the chiller to be powered from an alternate emergency power supply. Additionally, operator action is necessary to align the AHUs to the available chillers and to align the swing chiller to the operable power supply in the event of a total Loss of Offsite Power to the station with a single failure to an emergency bus or a chiller. After the two additional chillers are installed and electrical power modifications are completed to the existing chillers, the MCR and ESGR Air Conditioning System can be operated to eliminate the necessity for manual realignment of the AHUs and the swing chiller.

To complete the MCR & ESGR Air Conditioning System Upgrade Program the existing interim operating restrictions in Technical Specifications must be revised to permit use of the two new safety-related chillers (1-VS-E-4D and 4E) to meet the operability requirements and complete the final plant modifications. Eliminating specific chiller identification from the Technical Specifications provides the flexibility necessary to use the two new safety-related chillers to support plant operation and remove an existing chiller from service for modification while maintaining the required chiller capacity and equipment redundancy.

Specific Changes

Technical Specification 3.23.C.1.a requires chillers 1-VS-E-4A, 4B, and 4C to be operable whenever either unit is above Cold Shutdown. The proposed Technical Specification changes will require:

- three main control and emergency switchgear room chillers be operable whenever either unit is above Cold Shutdown,
- the three operable chillers be powered from three of the four emergency buses, and
- one of the three operable chillers be capable of being powered from the fourth emergency bus.

An action statement is being added to allow one hour to restore one of two inoperable chillers to operable, when two of the three required chillers become inoperable, prior to shutting down both units. This action statement will eliminate immediate entry into TS 3.0.1.

In order to complete chilled water connections in the existing loops for the new chillers, a Technical Specification change was necessary to allow planned entries into the

seven day action statements (Amendments Nos. 168 and 167). The connections have been completed. Thus, the footnote alluding to the planned entries into the action statement is being deleted.

The AHUs have been replaced with larger capacity units which return the AHU trains to 100% capacity, and the interim operating restrictions on the AHUs have been removed. With the AHUs returned to 100% capacity the associated fire watch is no longer necessary in the ESGRs. Therefore, the Basis Section is being revised to delete the required fire watch in the ESGRs.

The Basis Section is being changed to discuss the configuration and operation of the MCR and ESGR air conditioning system with the two new safety-related chillers.

The Basis Section of Technical Specification 3.16 is being changed to reflect the new power scheme of the five control room chillers and associated chilled water pumps. Each emergency bus will be capable of powering two chillers and the associated chilled water pumps.

Defined words are being capitalized throughout Section 3.23. In addition, system names are being capitalized and acronyms are being spelled out for consistency.

Safety Significance

These Technical Specifications changes will eliminate the specific chiller identification from the operability requirement of Technical Specification 3.23.C.1.a. These changes will continue to provide 100% air conditioning system capacity to support plant operations. The revised Technical Specifications will continue to require three operable chillers, powered from three of the four emergency buses with one of the chillers capable of being powered from the fourth emergency bus, whenever either unit is above Cold Shutdown. This requirement meets the single failure requirements and provides adequate heat removal capacity during both normal and accident conditions.

Operation of the MCR and ESGR Air Conditioning System following these modifications continues to ensure adequate cooling capacity for normal and accident conditions. Equipment redundancy prevents a total loss of air conditioning during any single failure.

Significant Hazards Consideration

Virginia Electric and Power Company has reviewed the proposed changes against the criteria of 10 CFR 50.92 and has concluded that the changes as proposed do not pose a significant hazards consideration. Specifically, operation of the Surry Power Station in accordance with the proposed Technical Specification changes will not:

1. Involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated.

   The Main Control Room and Emergency Switchgear Room Air Conditioning System is not involved in the initiation of any previously evaluated accidents. Therefore, the probability of such accidents is not affected. The requirement to have three chillers operable whenever either unit is above Cold Shutdown is being maintained. Any three operable chillers, powered from three of the four emergency buses with one of the chillers capable of being powered from the fourth emergency bus, will continue to provide equivalent capacity and redundancy to remove the heat load during normal and accident conditions. Providing one hour to restore a second chiller to operable status when there is only one operable chiller does not change air conditioning system or equipment operation. Therefore, the probability of occurrence and the consequence of an accident previously evaluated is not increased.

   Elimination of the fire watch in the emergency switchgear rooms does not affect the probability or consequences of any previously analyzed accident. The firewatch was an interim measure pending completion of the AHU upgrade restoring air handling capacity to original design. The AHU modifications are complete and the interim firewatch is no longer necessary. Therefore, the fire watch has no impact on the probability of occurrence or consequences of an accident. The administrative changes do not impact plant operation or system design. Thus, the consequences of an accident are not being affected by this change.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed changes do not introduce any new failure modes or accident precursors. Eliminating the specific chiller identification from the operability

requirements does not create any new or different kind of accident scenarios. Operation of the Main Control Room and Emergency Switchgear Room Air Conditioning System does not change. Providing one hour to restore a second chiller to operable status when there is only one operable chiller does not change air conditioning system or equipment operation.

Elimination of the fire watch in the Emergency Switchgear Rooms does not create any new or different kind of accident scenario. The air handling capacity in the Main Control and Emergency Switchgear Rooms has been restored to original design capacity. Therefore, the interim firewatch is unnecessary for Appendix R considerations. The administrative changes do not impact plant operation or system design. Therefore, no new or different kind of accident is being created.

3. Involve a significant reduction in a margin of safety.

The revised Technical Specification maintains the required capacity and redundancy in the Main Control Room and Emergency Switchgear Room Air Conditioning System to ensure sufficient heat removal during normal and accident conditions. Providing one hour to restore a second chiller to operable status when there is only one operable chiller does not significantly reduce the margin of safety.

The air handling capacity in the Main Control Room and Emergency Switchgear Room has been restored to original design capacity. Therefore, the interim firewatch is unnecessary for Appendix R considerations. The administrative changes do not impact plant operation or system design. Therefore, the margin of safety as defined in any Technical Specification is not reduced.