

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 10, 1998

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

Serial No. 98-651
NL&OS/GSS/ETS R0
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

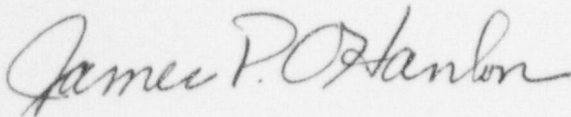
VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
PROPOSED TECHNICAL SPECIFICATION CHANGES
PRESSURIZER HEATER EMERGENCY POWER SOURCE CLARIFICATION

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company requests amendments, in the form of changes to the Technical Specifications and to Facility Operating License Numbers NPF-4 and NPF-7 for North Anna Power Station Units 1 and 2, respectively. The proposed changes will clarify the operability requirements for the pressurizer heaters and the emergency power source for the pressurizer heaters. A discussion of the proposed Technical Specifications changes is provided in Attachment 1.

The proposed Technical Specifications changes have been reviewed and approved by the Station Nuclear Safety and Operating Committee and the Management Safety Review Committee. It has been determined that the proposed Technical Specifications changes do not involve an unreviewed safety question as defined in 10 CFR 50.59 or a significant hazards consideration as defined in 10 CFR 50.92. The proposed Technical Specifications changes are provided as a mark-up in Attachment 2 and a typed version in Attachment 3. The basis for our determination that the changes do not involve a significant hazards consideration is provided in Attachment 4.

If you have any further questions, please contact us.

Very truly yours,



James P. O'Hanlon
Senior Vice President - Nuclear

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Attachments

1. Discussion of Changes
2. Mark-up of Technical Specifications Changes
3. Proposed Technical Specifications Changes
4. Significant Hazards Consideration Determination

Commitments made in this letter:

1. There are no commitments in this letter

cc: U.S. Nuclear Regulatory Commission
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Atlanta Federal Center
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Suite 23T85
Atlanta, Georgia 30303

Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

Commissioner
Department of Radiological Health
Room 104A
1500 East Main Street
Richmond, VA 23219

COMMONWEALTH OF VIRGINIA)

COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by J. P. O'Hanlon, who is Senior Vice President - Nuclear, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 10th day of November, 1998.

My Commission Expires: March 31, 2000.

Maggie McClure
Notary Public

(SEAL)

Attachment 1
Discussion of Changes

North Anna Power Station
Units 1 and 2
Virginia Electric and Power Company

Discussion of Change

Introduction

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company requests changes to the Technical Specifications Limiting Condition for Operation (LCO) and the associated Action Statement (AS) for the pressurizer heaters. The proposed changes will clarify the operability requirements for the pressurizer heaters and eliminate a potential verbatim compliance issue associated with the pressurizer heaters and the emergency power supply. This verbatim compliance issue was created when the Emergency Diesel Generator allowed outage time was changed from seventy-two hours to fourteen days.

The proposed changes will continue to ensure the pressurizer heaters are operable to perform their intended safety function during plant accident scenarios. Initiating events, including loss of offsite power where pressurizer heaters are required to maintain natural circulation, were included in the PRA that was completed to support the fourteen day EDG allowed outage time. Therefore, the proposed changes do not create an unreviewed safety question.

Background

Current Licensing Basis

The emergency power supply for the pressurizer heaters is consistent with satisfying the requirements of General Design Criteria 10, 14, 15, 17, and 20 of Appendix A to Part 50 for a loss of offsite power event. The pressurizer heater power supply design provides the capability to supply, from either the offsite power source or the emergency power source, a predetermined number of pressurizer heaters and associated controls necessary to establish and maintain natural circulation at hot standby conditions. The required heaters and their controls are connected to the emergency buses in a manner that provide redundant power supply capability. The Technical Specifications currently require "at least 125 kW of pressurizer heaters" to be operable. Consistent with NUREG-0737, Item II.E.3.1.1, Emergency Power Supply for Pressurizer Heaters, two redundant groups of 125 kW heaters powered from emergency busses are maintained operable to meet the Technical Specifications requirement.

Design Basis

The primary purpose of the pressurizer electrical immersion heaters is to heat and maintain the water in the pressurizer at or above saturation temperature corresponding to the desired RCS pressure. The pressurizer heaters are divided into 5 groups, which extend vertically through the lower head into the pressurizer water space. A minimum required capacity of pressurizer heaters (125Kw) capable of being powered from its associated emergency bus ensures that the RCS pressure can be maintained at or

above saturation temperature during a loss of offsite power. The capability to maintain and control system pressure is important for maintaining subcooled conditions in the RCS and ensuring the capability to remove core decay heat by either forced or natural circulation of reactor coolant. Unless adequate heater capacity is available, the hot high pressure condition cannot be maintained indefinitely and still provide the required subcooling margin in the primary system.

Discussion

On August 26, 1998, the NRC issued amendments 214 and 195 to the North Anna Power Station Technical Specifications for Units 1 and 2 respectively, which permitted a fourteen day allowed outage time (AOT) for an inoperable EDG in lieu of the original 72 hour allowed outage time. However, the action statement for the pressurizer heaters permits continued operation for up to 72 hours with an inoperable emergency power supply for the pressurizer heaters. Therefore, to eliminate any potential compliance issue with entry into the fourteen day AOT for the EDG, the LCO and Action Statement are being revised. In addition, the number of groups of heaters required to be operable will be delineated in LCO.

The proposed changes will revise LCO 3.4.4 to require that the pressurizer have two groups of pressurizer heaters operable with a capacity of greater than or equal to 125 kW and capable of being powered from its associated emergency bus. There are 5 groups of pressurizer heaters. Groups 1, 2, 4 and 5 are backup heaters. Group 3 consists of proportional heaters. Groups 1 and 4 are powered from the emergency bus and are governed by the Technical Specification. The emergency bus for the pressurizer heaters is capable of being powered from either the offsite power supply, the emergency power supply or the station blackout diesel generator.

The Action Statement will also be revised to permit up to 72 hours with inoperable heaters, eliminating the confusion with the emergency power supply. With an inoperable power supply, either normal or emergency, the appropriate electrical distribution Action Statement will be entered. Therefore, the pressurizer heater operability will be addressed in accordance with TS 3.0.5. TS 3.0.5 permits a component/train to be considered operable with an inoperable power source (normal or emergency) if the other redundant component/ train is operable with both the normal and emergency power supplies operable. The 72 hour allowed outage time for inoperable heaters has not changed and is considered reasonable based on operating experience to reach the required plant conditions from full power conditions in an orderly manner without challenging plant systems. The 72 hours is also reasonable considering the anticipation that a demand caused by a loss of offsite power would be unlikely in this period. Additionally, pressure control can be maintained during this time using the remaining heaters.

Specific Changes

The existing Technical Specifications will be revised as noted below:

Existing TS 3.4.4

3.4.4 The pressurizer shall be OPERABLE with at least 125 kW of pressurizer heaters and a water volume of less than or equal to 1240 cubic feet.

APPLICABILITY: MODES 1, 2, and 3

ACTION:

- a. With the pressurizer inoperable due to an inoperable emergency power supply for the pressurizer heaters either restore the inoperable emergency power supply within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With the pressurizer otherwise inoperable, be in at least HOT STANDBY with the reactor trip breakers open within 6 hours and in HOT SHUTDOWN within the following 6 hours.

Revise TS 3.4.4 to read:

3.4.4 The pressurizer shall be OPERABLE with **two groups of pressurizer heaters OPERABLE with the capacity of each group greater than or equal to 125 kW and capable of being powered from its associated emergency bus**, and a water volume of less than or equal to 1240 cubic feet.

APPLICABILITY: MODES 1, 2, and 3

ACTION:

- a. With **one required group of pressurizer heaters inoperable, restore the required group of pressurizer heaters to OPERABLE status** within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With the pressurizer otherwise inoperable, be in at least HOT STANDBY with the reactor trip breakers open within 6 hours and in HOT SHUTDOWN within the following 6 hours.

Safety Significance

To eliminate any potential compliance issue with entry into the fourteen day AOT for the EDG, the LCO and Action Statement for the pressurizer heaters are being revised to eliminate this potential compliance issue and clarify operability requirements. In addition the proposed changes revise LCO 3.4.4 to require the pressurizer to have two groups of heaters operable capable of being powered from its associated emergency bus.

- a) The proposed changes would not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report.

The pressurizer heaters are not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not increased. The pressurizer heaters remain operable as assumed in the accident analysis to mitigate the consequences of any accident previously evaluated. Therefore, the proposed changes do not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important previously evaluated in the safety analysis report.

- b) The proposed changes do not create the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report.

The proposed changes do not involve any physical alteration of the plant or changes in methods governing normal plant operation. The operation and design of the pressurizer heaters and the associated power supplies are not changed by the proposed changes. The proposed changes do not impose any new or eliminate any existing requirements. Therefore, it is concluded that no new or different kind of accident or malfunction from any previously evaluated has been created.

- c) The proposed changes do not result in a reduction in margin of safety as defined in the basis for any Technical Specifications.

The proposed changes will not reduce the margin of safety since the change has no effect on any safety analyses assumptions. The pressurizer heaters remain operable as assumed in the safety analysis to mitigate the consequences of any accident previously analyzed. The proposed changes only clarify the operability requirements and associated action statement for the pressurizer heaters and associated emergency power supplies. Therefore, the proposed changes do not result in a significant reduction in a margin of safety.

Attachment 2

Mark-up of Technical Specifications Changes

**North Anna Power Station
Units 1 and 2
Virginia Electric and Power Company**

Unit 1

**North Anna Power Station
Units 1 and 2
Virginia Electric and Power Company**