



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 202 AND 183 TO

FACILITY OPERATING LICENSE NOS. NPF-4 AND NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY

OLD DOMINION ELECTRIC COOPERATIVE

NORTH ANNA POWER STATION, UNITS NO. 1 AND NO. 2

DOCKET NOS. 50-338 AND 50-339

1.0 INTRODUCTION

During plant startup and shutdown while the reactor is operated under low temperature conditions, two of the three charging pumps and one of the two safety injection pumps must be rendered incapable of injecting water into the reactor coolant system (RCS). This is required to maintain the plant operating status consistent with the assumptions used in the analysis of a mass addition transient for determining setpoints for Low Temperature Overpressure Protection (LTOP) system. With respect to the above requirements, the current technical specifications (TS) do not have provisions that allow switching from one operating charging pump to another without temporarily interrupting the needed seal injection flow to the reactor coolant pumps (RCPs). Also, the current TS require that the pumps be rendered inoperable by only one method - placing their control switches in the pull-to-lock position.

By letters dated July 26, 1995 and April 25, 1996, Virginia Electric and Power Company proposed changes to TS 3/4.1.2.3, 3/4.1.2.4, 3/4.5.3 and their associated Bases which would permit switching from one operable charging pump to another without interrupting the required seal injection flow to RCPs and provide an alternative means of rendering the pumps inoperable. The proposed changes also include several administrative and editorial changes to TS 3/4.1.2.3, 3/4.1.2.4, 3/4.5.2, 3/4.5.3, and their associated Bases. The April 25, 1996, letter provided clarifying information that did not change the scope of the July 26, 1995, application and initial proposed no significant hazards consideration determination.

2.0 EVALUATION

In its letter dated July 26, 1995, the licensee proposed to add footnotes to TS 3/4.1.2.3, 3/4.1.2.4 and 3/4.5.3 for North Anna Units 1 and 2 to permit two operating charging pumps that are capable of injecting into the RCS as a means of providing the required RCP seal injection flow while switching from one operable charging pump to another. The plant administrative controls will

ensure that the momentary two-pump-operable pump switching method would not be utilized during water solid conditions. This proposed change is consistent with the Improved Standard Technical Specification. The justification for this change is based on the pump switching evolution being under the direct administrative control of a licensed operator and being of short duration.

The licensee also proposed to delete the current TS requirement relative to the method of rendering pumps inoperable. The licensee proposed changes to the TS Bases to indicate that rendering a pump inoperable may be accomplished by methods such as placing the control switch in the pull-to-lock position, tagging (securing the breaker in the open position) of the power supply breaker, or closing of pump discharge valve. However, there is only one isolation valve at each of the charging pump discharge lines. Therefore, closing of the single discharge valve is not sufficient to prevent the charging pump from injecting flow into the RCS considering the possibility of a single human error following a mass addition event. In response to this concern, in a letter dated April 25, 1996, the licensee submitted its revised TS Bases which indicate that if the pump discharge valve is used to render a pump inoperable during solid water operation, the valve will be deenergized and tagged in the closed position. The staff considers this approach reasonable.

The licensee's proposed changes in TS reflect the changes discussed above. The staff has reviewed the licensee's submittal and finds that the changes are reasonably conservative and are acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Virginia State official was notified of the proposed issuance of the amendment. The State official had no comment.

### 4.0 ENVIRONMENTAL CONSIDERATION

These amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding (60 FR 45190). Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

## 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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