



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENTS NO. 60 AND NO. 44 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

Introduction:

By letters dated December 30, 1983 and June 4, 1984, the Virginia Electric and Power Company (the licensee) requested a change to the Technical Specifications (TS) for the North Anna Power Station, Units No. 1 and No. 2 (NA-1&2). The proposed change would correct an administrative error presently existing in the NA-1&2 TS.

Specifically, the change would revise the P-7 reactor trip system interlock setpoint as specified in the NA-1&2 TS Table 3.3-1, Reactor Trip Systems Interlocks, to indicate "Pressure equivalent to 10 percent rated turbine power" instead of the presently specified "pressure equivalent to 10% rated thermal power."

Our discussion and evaluation of the proposed change is provided below.

Discussion:

The purpose of the P-7 interlock is to allow an orderly reactor startup when plant primary conditions are off normal and a unit is coming out of a shutdown condition. For example, not all reactor coolant pumps may be running, pressurizer level and pressure will be outside normal operating ranges and the turbine may not be latched and loaded to prevent uncalled for reactor trips during startup conditions, certain reactor trips such as Reactor Coolant System low flow, Reactor Coolant Pump breakers open, pressurizer low pressure, pressurizer high level, Reactor Coolant Pump Bus undervoltage or underfrequency and turbine unlatched are permitted to be blocked by the P-7 interlock provided power level is limited to 10 percent.

The determination of actual plant power level for the P-7 interlock is based on the P-10 interlock which serves as a direct measure of 10% rated thermal power (i.e. reactor power) and the P-13 interlock which, by design, is to be a measure of 10% rated turbine power. P-10 is sensed via the excore nuclear

instrumentation system power range detectors, and P-13 is sensed via first stage impulse pressure in the high pressure turbine.

The existing TS for the P-13 input to the P-7 setpoint incorrectly relates to 10% rated reactor power.

Turbine impulse pressure is not a constant value at 10 percent rated thermal power since the turbine is not the only steam load. Use of auxiliary steam and/or steam dumps causes the turbine impulse pressure to vary for a given rated thermal power. Therefore, rated thermal power cannot be used as a measure of turbine power which is what the P-13 interlock is designed to reflect.

#### Evaluation:

The proposed change as discussed above provides consistency with the approved NA-1&2 Setpoint Study and Precautions, Limitations, and Setpoints (SS/PLS) documentation and will allow the affected systems to operate as approved and designed. The licensee's proposed change provides consistency with the approved NA-1&2 SS/PLS documentation and corrects a presently existing error in the NA-1&2 TS and is therefore administrative in nature. Based on the above, we find the licensee's proposed change to be acceptable.

#### Environmental Consideration:

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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. 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 these amendments.

#### Conclusion:

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: December 6, 1984

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