



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

P. O. BOX 97 ■ PERRY, OHIO 44081 ■ TELEPHONE (216) 259-3737 ■ ADDRESS-10 CENTER ROAD

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PERRY NUCLEAR POWER PLANT

Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

May 20, 1988
PY-CEI/NRR-0317 L

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

Perry Nuclear Power Plant
Docket No. 50-440
Technical Specification
Change Request on Turbine
First Stage Pressure

Gentlemen:

The Cleveland Electric Illuminating Company (CEI) hereby requests amendment of Facility Operating License NPF-58 for the Perry Nuclear Power Plant, Unit 1. In accordance with the requirements of 10 CFR 170.12 a check in the amount of \$150.00 is enclosed. In accordance with the requirements of 10 CFR 50.91(b)(1), a copy of this request for amendment has been sent to the State of Ohio as indicated below.

This amendment requests revision of note (h) to Technical Specification Table 3.3.1-1, note (b) to Technical Specification Table 3.3.4.2-1 and the Bases Sections 2.2.1.10 and 2.2.1.11 to revise the first stage turbine pressure setpoints based on test data.

Attachment 1 provides the Summary, Safety Analysis, Significant Hazards and Environmental Impact Considerations. Attachment 2 is a copy of the marked up Technical Specification pages.

Should you have any questions, please feel free to call.

Very truly yours,

Al Kaplan
Vice President
Nuclear Group

AK:cab

Attachments

cc: K. Connaughton
T. Colburn
J. Harris (State of Ohio)

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Summary

The proposed amendment changes the initial setpoints for turbine first stage pressure on Technical Specification tables 3.3.1-1 (note h) and 3.3.4.2-1 (note b). The existing values were based on turbine thermal heat balance calculations, and have been shown to be overly conservative through testing. The original requirement that the turbine valve closure scrams should be bypassed below the turbine first stage pressure equivalent to 40% of RATED THERMAL POWER has not changed. The Setpoints and Allowable Values are being established based on data determined by startup testing. The basis for reducing the setpoints due to reduced feedwater temperature also has not changed. In the proposed change, the setpoints and allowable values would be depicted in terms of actual pressure, instead of a certain span on the instrument. The actual pressure is more meaningful and permits future instrument replacements without necessitating a Technical Specification change merely due to instrument scaling differences.

Safety Analysis

As stated above the proposed change does not change the bases for the Setpoint or Allowable Value. The change request is based on test data which provided the actual value of turbine first stage pressure corresponding to 40% Rated Thermal Power. The Setpoints and Allowable Values were then calculated for normal operation and for reduced Feedwater heating operation.

The purpose of this setpoint is to establish when a turbine trip will cause an anticipatory reactor trip, and an end of cycle recirculation pump trip. This trip bypass is discussed in various places in the Updated Safety Analysis Report (USAR) including Sections 7.2.1.1.b.5 and 6, Section 7.6.1.6, Sections 15.2.2 and 15.2.3 and Appendix 15D, Section 15D.9. Turbine first stage pressure is used to sense power since this pressure increases approximately linearly with power. The existing Technical Specifications have established the Setpoint and Allowable Value as a percentage of calibration span of the existing instruments. The proposed Setpoint and Allowable Value are in units of pressure (PSIG). In both cases the setpoint and Allowable Value are based on 40% of Rated Thermal Power. Testing has been performed since the establishment of the initial setpoints, which provided actual data for first stage pressure at 40% of Rated Thermal Power. Using this data, Allowable Values and Trip Setpoints were established, with allowance for instrument accuracies, calibration accuracy and instrument drift. Since the basis for the setpoint has not changed there is no safety significance to the proposed changes.

Significant Hazards Analysis

The standards used to arrive at a determination that a request for amendment requires no significant hazards consideration are included in the Commission's Regulations, 10 CFR 50.92, which state that the operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. CEI has reviewed the proposed change with respect to these three factors.

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The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The basis for establishing the Trip Setpoint and Allowable Values has not changed (40% of Rated Thermal Power). The Trip Setpoint and Allowable Value are being changed based on test data of actual turbine first stage pressure when the plant was operating at 40% of Rated Thermal Power. As such there is no change to the probability of previously evaluated accidents. Furthermore the consequences of an accident would not change since the basis for this scram bypass has not changed. Thus there is no increase in the probability or consequences of any accident previously evaluated.

The proposed change does not create the possibility of a new or different kind of accident.

As previously stated the basis for establishing the Setpoint and Allowable Value has not changed, nor has the function of the turbine first stage pressure instruments. Therefore this proposed change has not created the possibility of a new or different kind of accident.

The proposed change does not involve a significant reduction in the margin of safety.

The proposed change continues to be based upon 40% of Rated Thermal power. Test data has accurately determined what turbine first stage pressure is equivalent to 40% of Rated Thermal Power. Based on this test data, the proposed Setpoints and Allowable Values were determined, and are conservative with respect to the observed pressure at 40% power. Therefore the proposed change more accurately represents the Setpoint and Allowable Value for turbine first stage pressure, as described in the bases of this Technical Specification. Therefore the change does not involve a reduction in the margin of safety.

Therefore, CEI has concluded that this proposed amendment involves no significant hazards considerations.

Environmental Impact

The Cleveland Electric Illuminating Company has reviewed the proposed Technical Specification change against the criteria of 10 CFR 51.22 for environmental considerations. As shown above, the proposed change does not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, CEI concludes that the proposed Technical Specification change meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.