CENTERIOR ENERGY

PERRY NUCLEAR POWER PLANT
10 CENTER ROAD
PERRY, OHIO 44081
(216) 259-3737

Mail Address:
P.O. BOX 97
PERRY, OHIO 44081

Donald C. Shelton
SENIOR VICE PRESIDENT
NUCLEAR

August 29, 1995
PY-CEI/NRR-1969L

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

Perry Nuclear Power Plant
Docket No. 50-440
License Amendment Request: Instrumentation
Trip Setpoints and Allowable Values

Gentlemen:

Amendment of the Facility Operating License (NPF-58) for the Perry Nuclear Power Plant (PNPP) Unit 1 is requested. This License Amendment Application proposes the revision of Technical Specification Allowable Values and Trip Setpoints for selected plant process instrumentation.

The new Allowable Values and Trip Setpoints were calculated using the Instrument Setpoint Methodology discussed in a previous letter dated October 15, 1993 (PY-CEI/NRR-1706L). This current amendment request fulfills a commitment made in that letter to incorporate into the Technical Specifications (TS) those new Allowable Values and Trip Setpoints which were more conservative than the current TS values.

A Summary, Description of Proposed Changes, Safety Analysis, and an Environmental Consideration are provided in Attachment 1. Attachment 2 provides a copy of the marked up TS pages, in both the present format and the format required following implementation of Amendment 69 (the improved Technical Specifications). Attachment 3 provides the Significant Hazards Consideration.

If you have questions or require additional information, please contact Mr. James D. Kloosterman, Manager - Regulatory Affairs at (216) 280-5833.

Very truly yours,

BSF:sc

Attachments

cc: NRC Project Manager
NRC Resident Inspector Office
NRC Region III
State of Ohio

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

A001

SUMMARY

In 1983 during the Technical Specification reviews for various facilities, the NRC staff identified several concerns regarding the values of protection system trip setpoints and the methodology used for their determination. The NRC relayed this issue to the Perry Nuclear Power Plant (PNPP) in a letter dated June 21, 1983. As a result of this issue, and in an effort to conserve resources, a number of these utilities formed the Instrument Setpoint Methodology Group (ISMG). The ISMG program was accepted by the staff in a letter from B. Youngblood (NRC) to J. Carolan (ISMG) dated July 23, 1984. The endorsement of the activities of this group for the Perry Nuclear Power Plant is detailed in a letter dated October 9, 1984 (PY-CEI/NRR-0132L). The instrument channels selected for PNPP were based on the functions assumed to operate in the analyses contained in the Final Safety Analysis Report (FSAR; since renamed as the Updated Safety Analysis Report (USAR)) Chapters 6 and 15.

The PNPP FSAR was updated in 1985 to include a commitment in Appendix 1B to provide a report documenting the basis and methodology for establishing protection system trip setpoints and allowable values based on the ISMG effort. The ISMG worked with General Electric (GE) to develop the Instrument Setpoint Methodology Report. This activity culminated in the submittal of GE Topical Report NEDC-31336, "General Electric Instrument Setpoint Methodology," dated October 1986.

In a letter dated March 23, 1993, PNPP was notified that the NRC staff had completed its review of the GE Topical Report. A copy of the staff's Safety Evaluation on the Topical Report was also provided. Work then commenced on the PNPP-specific submittal. The results of the calculations and analyses were submitted to the NRC in a letter dated October 15, 1993 (PY-CEI/NRR-1706L). The letter noted that several calculated Allowable Values and Trip Setpoints were more conservative than the current Technical Specification values, and that changes to the Technical Specifications would be submitted in a future license amendment request. These changes are detailed below.

DESCRIPTION OF PROPOSED CHANGES

Note that the new values provided below and in the TS markups in Attachment 2 are rounded from those reported in the letter dated October 15, 1993 (PY-CEI/NRR-1706L). Also, the Trip Setpoints and Allowable Values for the LPCI A, B, and C Injection Valve Permissive were adjusted from those reported in the October 15, 1993 letter, in order to remove head correction factors. This is consistent with the method of specifying other Perry Technical Specification setpoints. Head correction is accomplished in instrumentation calibration instructions. Removal of the head correction factors masks the changes to the Trip Setpoint and Allowable Value for the LPCI Injection Valve Permissive. The values for the Trip Setpoint and Allowable Value appear to be raised. However, the values stated in PY-CEI/NRR-1706L, which include the head correction factors, show that the Trip Setpoint and Allowable Value were, in fact, lowered. Since the function provided by the LPCI Injection Valve Permissive is to protect low

pressure LPCI pipe, lowering the Trip Setpoint and Allowable Value increases the margin between the rated pipe pressure and the pressure the pipe would see in an accident. Thus, the proposed changes are more conservative.

Current Technical Specifications

If this amendment is issued prior to implementation of the improved Technical Specifications (Amendment 69), Technical Specification Trip Setpoints and Allowable Values for the following parameters should be revised as noted in Attachment 2:

(1) Table 3.3.2-2

Item 2.c, Main Steam Line Pressure - Low

	Allowable Value (psig)
From:	≥795.0
To:	≥795.2

Item 2.d, Main Steam Line Flow - High

	Allowable Value (psid)
From:	≤191
To:	≤189.3

(2) Table 3.3.3-2

Item A.1.e, Reactor Vessel Pressure - Low (LPCI Injection Valve Permissive) {for LPCI Pump A}

	Trip Setpoint (psig)	Allowable Value (psig)
From:	502.5 + 5, -10 (= 492.5 → 507.5)	502.5 + 10, -40 (= 462.5 → 512.5)
To:	≥527.18 and ≤532.82	≥490.0 and ≤537.1

Item A.2.c, ADS Timer

	Allowable Value (seconds)
From:	≤117
To:	≥100.5 and ≤109.5

Item B.1.c, Reactor Vessel Pressure - Low (LPCI Injection Valve Permissive) {for LPCI Pump B and LPCI Pump C}

	Trip Setpoint (psig)	Allowable Value (psig)
LPCI B		
From:	508.0 + 5, -10 (= 498.0 → 513.0)	508.0 +10, -40 (= 468.0 → 518.0)
To:	≥527.18 and ≤532.82	≥490.0 and ≤537.1
LPCI C		
From:	506.6 + 5, -10 (= 496.6 → 511.6)	506.6 + 10, -40 (= 466.6 → 516.6)
To:	≥527.18 and ≤532.82	≥490.0 and ≤537.1

Item B.2.c, ADS Timer

	Allowable Value (seconds)
From:	≤117
To:	≥100.5 and ≤109.5

(3) Table 3.3.9-2

Item 1.b, Containment Pressure - High

	Allowable Value (psig)
From:	≤8.85
To:	≤8.71

Improved Technical Specifications

The following Technical Specification Tables in the improved TS format (i.e., Amendment 69) should be revised to reflect the Allowable Values listed above (Trip Setpoints are not incorporated in the improved Technical Specification format):

(1) Table 3.3.5.1-1

Item 1.e, Reactor Vessel Pressure - Low (LPCI Injection Valve Permissive) {for LPCI A subsystem}
Allowable Value (AV) = ≥490.0 and ≤537.1 psig

Item 2.d, Reactor Vessel Pressure - Low (LPCI Injection Valve Permissive) {for LPCI B and LPCI C subsystems}
AV = ≥490.0 and ≤537.1 psig

Item 4.b, ADS Initiation Timer
AV = ≥100.5 and ≤109.5 seconds

Item 5.b. ADS Initiation Timer
AV = ≥100.5 and ≤109.5 seconds

(2) Table 3.3.6.1-1

Item 1.b, Main Steam Line Pressure - Low
AV = ≥795.2 psig

Item 1.c, Main Steam Line Flow - High
AV = ≤189.3 psid

(3) Table 3.3.6.2-1

Item 2, Containment Pressure - High
AV = ≤8.71 psig

SAFETY ANALYSIS

The Allowable Values and Trip Setpoints involved with this particular license amendment request were developed using methods of analysis conforming to those described in the Topical Report. As provided for in the ISMG methodology, additional vendor data and PNPP-specific field data were factored into the calculations as they became available. By letter dated July 18, 1995, the NRC staff forwarded a Safety Evaluation presenting the results of their review of the PNPP-specific incorporation of the setpoint methodology. This letter also noted that the commitment contained in USAR Appendix 1B was considered to be satisfied.

The proposed revised setpoints/allowable values are more conservative than those currently approved in the Technical Specifications. Therefore, any proposed system or component actuations will occur earlier, resulting in a more conservative plant response. The proposed changes to the Technical Specifications do not introduce any new components nor modify the design of any existing components. Other than making setpoints/allowable values of existing instrumentation more conservative, the change does not affect the design or function of any plant system, structure, or component, nor does it change the way plant systems are operated. Since the proposed revised setpoints are more conservative than the existing values, the margin of safety would be increased by issuance of the changes.

Calculations are available for inspection at PNPP.

ENVIRONMENTAL CONSIDERATION

The proposed Technical Specification change request has been reviewed against the criteria of 10 CFR 51.22 for environmental considerations. As shown above and in Attachment 3, the proposed change does not involve a significant hazards consideration, does not increase the types and amounts of effluents that may be released offsite, and does not significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, it has been concluded that the proposed Technical Specification change request meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.