



Portland General Electric Company

James E. Cross Vice President, Nuclear

January 30, 1991

Trojan Nuclear Plant  
Docket 50-344  
License NPF-1

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington DC 20555

Dear Sirs:

Reactor Coolant Pump Bus Undervoltage and  
Underfrequency Trips of the Reactor Protection System

Licensee Event Report (LER) 90-17, "Lack of Proper Design Interface During Original Plant Design Could Cause Common Mode Failure of a Reactor Trip or ESFAS Function", dated July 2, 1990, discusses an event in which a common failure mode could have affected the primary reactor protection (undervoltage and underfrequency trips) for the complete loss of forced reactor coolant flow accident, which is of concern above 10 percent power. As reported in the LER, a reanalysis of the accident shows that the Plant can be operated with the low reactor coolant flow trip credited as the primary reactor protection, recognizing that there is an associated reduction in departure from nucleate boiling (DNB) margin. In the LER, Portland General Electric Company (PGE) committed to inform the Nuclear Regulatory Commission (NRC) of our plans regarding restoration of DNB margin by January 31, 1991, and to revise Chapter 15, "Accident Analysis", of the Final Safety Analysis Report (FSAR) to incorporate the reanalysis of the complete loss of forced reactor coolant flow accident with the low reactor coolant flow trip as the primary reactor protection. Furthermore, in a meeting with the NRC staff on June 12, 1990, PGE committed also to change the Trojan Technical Specifications (TTS) Bases to discuss the lower DNB margin that results from the reanalysis.

PGE has concluded that DNB margin will be restored by upgrading the undervoltage and underfrequency equipment and recrediting the undervoltage and underfrequency trips as the primary reactor protection for the complete loss of forced reactor coolant flow accident. It is PGE's intention to accomplish the upgrade prior to increasing power above 10 percent following startup from the 1991 Refueling Outage. However, due to the aggressiveness of this schedule, completing the modifications by the intended date is contingent upon receipt of materials and successful engineering review of the proposed design. Furthermore, to accomplish the upgrade during the 1991 Refueling Outage the 12-kV to 120-V potential transformers, which provide electrical isolation between the reactor trip circuitry and the non-Class 1E reactor coolant pump buses, are being purchased commercial

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Portland General Electric Company

Document Control Desk

January 30, 1991

Page 2

grade and dedicated for use in this safety-related application. If it becomes evident that the modifications cannot be completed as scheduled, we will inform the NRC and operate during the succeeding cycle based upon a new analysis which shows that the Plant can continue to be operated with the low reactor coolant flow trip as the primary reactor protection for the complete loss of forced reactor coolant flow accident.

By letter dated December 28, 1990, PGE informed the NRC that revision of the FSAR was being reconsidered since it would be affected by the development of our plans regarding restoration of DNB margin. We committed to address the plans for revising Chapter 15 of the FSAR in this letter which fulfills the commitment to inform you of our plans regarding restoration of DNB margin. Since restoration of DNB margin will be accomplished by restoring the Plant to its previously analyzed condition, no revision to the FSAR or TTS Bases will be accomplished to incorporate the reanalysis of the complete loss of forced reactor coolant flow accident with the low reactor coolant flow trip as the primary reactor protection.

Sincerely,

*J. E. Cross*  
for J. E. Cross

c: Mr. John B. Martin  
Regional Administrator, Region V  
U.S. Nuclear Regulatory Commission

Mr. David Stewart-Smith  
State of Oregon  
Department of Energy

Mr. R. C. Barr  
NRC Resident Inspector  
Trojan Nuclear Plant