



Portland General Electric Company

David W. Cockfield Vice President, Nuclear

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REGION V

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January 31, 1990

Trojan Nuclear Plant
Docket 50-344
License NPF-1

Mr. John B. Martin
Regional Administrator, Region V
U.S. Nuclear Regulatory Commission
1450 Maria Lane, Suite 210
Walnut Creek CA 94596-5368

Dear Mr. Martin:

Portland General Electric Company (PGE) Submittal
of the Results of the Multiple High Impedance Fault Analysis

This letter provides the results of the Multiple High Impedance Fault (HIF) Analysis recently completed for the Trojan Nuclear Plant. This letter responds to your letter of October 24, 1989, which summarized PGE's commitment to address the multiple HIF concern for Trojan.

The HIF analysis is based on the conservative assumption that all cables in a given fire area are affected simultaneously. Based on this assumption, the results of the HIF analysis identified several safe shutdown buses which may potentially be lost in the event multiple high impedance faults were to occur due to a fire. The buses of concern are the Engineered Safety Features (ESF) 480-Volt load centers and motor control centers. Manual operator actions will be relied upon to de-energize specific components not required for safe shutdown at their respective power feeder breakers to mitigate the effects of a high impedance fault.

Currently, Emergency Fire Procedure (EFP)-0, "Procedure in the Event of a Fire" and EFP-1, "Alternative Shutdown for Evacuation of Control Room Caused by Fire", include a caution statement on multiple grounds induced by a fire which may cause the loss of the ESF power supplies. The caution

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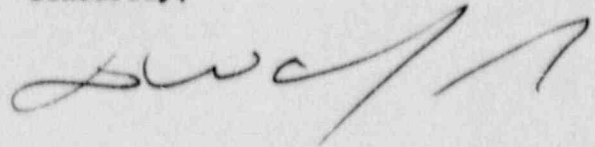
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statement states that if multiple faults are suspected, then ESF buses should be stripped and safe shutdown loads re-energized. To address the results of the HIF analysis, an attachment will be added to EFP-0 which will identify individual components that can be deenergized. The caution statement will be revised to direct the operators to this attachment. This revision to EFP-0 will be completed by July 1, 1990.

A revision to EFP-1 will not be necessary because specific steps are already included in the procedure to open the power feeder breaker for components not required for safe shutdown.

PGE is evaluating the desirability of reducing the conservatism in the HIF analysis to reduce the number of manual operator actions required. This effort would involve, as one option, performing detailed cable routing reviews to limit the number of cables assumed to fault. PGE will advise the NRC of any planned revisions to the HIF analysis.

Sincerely,



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

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

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