



Portland General Electric Company

Charles E. Brown, Jr. Assistant Vice President

November 7, 1978

Trojan Nuclear Plant  
Docket 50-344  
License NPF-1

Director of Nuclear Reactor Regulation  
ATTN: Mr. A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Sir:

Your letter of September 26, 1977 requested PGE perform an analysis of the potential for, and consequences of, boron dilution accidents at the Trojan Nuclear Plant. This analysis has been completed, with the results indicating that the potential for a boron dilution accident, similar to that described in your letter and other than those previously analyzed in the Trojan Final Safety Analysis Report (FSAR), is extremely unlikely.

The boron dilution incident described in your letter and caused by an inadvertent injection of a portion of the NaOH tank contents into the Reactor Coolant System (RCS) while in cold shutdown could not occur at Trojan because there are always two closed valves separating the NaOH tank from the RCS. Normal system lineup requires the NaOH tank isolation valve and the Containment recirculation sump isolation valves to be closed. During surveillance testing, the spray eductor isolation valve is closed prior to cycling the NaOH tank isolation valve. While injection of the entire contents of the NaOH tank into the RCS could result in reactor criticality under the most conservative assumptions, the injection rate would be much less than the 300-gpm dilution rate previously analyzed in Chapter 15 of the FSAR for a primary makeup water dilution during refueling. Sufficient time is available for operator evaluation and corrective action prior to criticality.

Our review of other possible unanalyzed boron dilution incidents indicates that all other credible dilution accidents during operating conditions have been adequately evaluated or are less limiting than those previously analyzed in the Trojan FSAR. In other postulated potential accidents,

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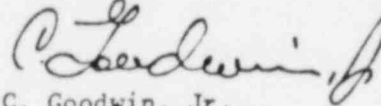
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either the dilution rate is lower than that assumed in the FSAR, or the volume of the RCS is greater than that assumed in the FSAR. In both cases, more time would be permitted for operator discovery and corrective action. As a result, we have concluded that no corrective actions (design or procedural) are required to preclude the occurrence or mitigate the consequences of postulated boron dilution accidents at the Trojan Nuclear Plant.

Sincerely,



C. Goodwin, Jr.  
Assistant Vice President  
Thermal Plant Operation and  
Maintenance

CG/GAZ/4rf4A19

c: Dr. Fred D. Miller, Director  
State of Oregon  
Department of Energy