

## ATTACHMENT B

WASHINGTON PUBLIC POWER SUPPLY SYSTEM  
NUCLEAR PROJECT NO. 2  
DOCKET NO. 50-397  
LICENSE NO. CPPR-93  
RHR PUMP DISCHARGE PRESSURE SWITCH  
10CFR50.55(e) CONDITION #209  
INTERIM REPORT

### DESCRIPTION OF DEFECT OR NONCOMPLIANCE

On the discharge side of the Residual Heat Removal (RHR) pumps are redundant pressure switches (RHR-PS-16A, B & C, RHR-PS-19A, B & C) with nominal setpoints of 100 psig. Their function is to "tell" the Automatic Depressurization System (ADS) that the RHR pumps are running. This permissive is needed before the ADS depressurizes the reactor vessel in a post-LOCA situation. The present installed locations for all these pressure switches may subject them to water hammer and disable them such that they cannot meet their safety function.

These pressure switches all have sensing points upstream of the pump discharge check valves at about El. 422'. During normal plant operation, with the RHR pumps in standby mode (not running), they will "see" the static head of the suppression pool, whose minimum elevation is 466' - 0 3/4". All the pressure switches are located on racks at elevation 501'. Therefore, the sensing lines will not be maintained full of water.

Upon pump start, there is a potential for water hammer in the sensing line. If water hammer disables the pressure switches, the ADS may not be initiated.

### SAFETY IMPLICATION

A substantial safety hazard could be reached during a small break LOCA scenario if the RHR pump discharge pressure switches are disabled. The reactor remains pressurized so that the low pressure systems (RHR and LPCS) cannot inject. At reactor water Level 1 (just above the active fuel), the ADS two-minute timer is started and waits for water level to recover. The ADS logic verifies that the RHR and LPCS pumps are running before it depressurizes the reactor. If the pressure switches are disabled at the start of the accident due to water hammer during pump start, no verification will occur and the reactor will not automatically depressurize. Manual depressurization can still occur, but using design basis accident assumptions, it cannot be taken credit for at least 10 minutes. With no automatic depressurization, we would be outside the safety analysis of FSAR Chapter 6 for a small break accident.

### APPROACH TO RESOLUTION

The Architect Engineer is investigating a method by which the pressure switch sensing line can be kept full to eliminate the water hammer effect. The anticipated corrective action is to relocate the instrument tap to downstream of the pump discharge check valve. Since this portion of the line is kept pressurized during normal operation, the potential for water hammer would be eliminated.