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SUBJECT: Forwards response to NUREG-0892, SER Outstanding Issue 8 re pressure interlocks on emergency core cooling injection valves. Issue considered closed.

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Washington Public Power Supply System

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Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Schwencer:

Subject: NUCLEAR PROJECT NO. 2
SAFETY EVALUATION REPORT, NUREG-0892, OUTSTANDING
ISSUE 1.7(8); PRESSURE INTERLOCKS ON EMERGENCY
CORE COOLING (ECC) INJECTION VALVES

Reference: a) Letter G02-82-129, G.D. Bouche (SS) to
A. Schwencer (NRC), "Submittal of SER
Open Issues", dated January 29, 1982
b) Letter G02-82-435, G.D. Bouche (SS) to
A. Schwencer (NRC), Same Subject, dated
May 12, 1982

The reference letters forwarded descriptions of the WNP-2 low pressure ECCS piping and pressure interlock. Reference (b) stated that the system and interlock design provided adequate assurance that the ECCS piping would not be subjected to pressures greater than design. However, as stated in Section 6.3.2.3 of the WNP-2 SER, "The staff requires that this interlock be present at all times for both automatic and manual valve actuation, and that the setpoints be such that the valve cannot be opened until reactor coolant pressure is below that of the low pressure ECCS involved".

In consideration of the staff's position to sense reactor coolant pressure for the interlock versus the present WNP-2 differential pressure design, the Supply System commits to modify the design.

With submittal of the attached position, the Supply System considers the staff's concerns satisfied and Outstanding Issue 8 of the WNP-2 SER, NUREG-0892, to be closed.

Very truly yours,

G.D. Bouche

G. D. Bouche
Deputy Director, Safety and Security

Boo!

PLP/jca
Attachment

cc: R Auluck - NRC
WS Chin - BPA
R Feil - NRC Site

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PDR ADOCK 05000397
E PDR



RESPONSE TO WNP-2 SER OUTSTANDING ISSUE 8,
"PRESSURE INTERLOCKS ON EMERGENCY
CORE COOLING INJECTION VALVES"

The current design of the low pressure emergency core cooling systems provides overpressurization protection from the reactor vessel through the use of testable check valves followed by normally closed motor operated emergency injection valves outside containment as depicted in the attached figure for a typical low pressure ECCS train. The injection valve receives an open signal based on either high drywell pressure or low reactor vessel level. The valve will not open until it receives a permissive signal based on the pressure differential across the valve. This design prevents injection valve opening when the differential pressure across the valve exceeds approximately 750 psid.

In order to preclude the possibility of overpressurization caused by a failure of the check valve while the motor operated injection valve is open, design changes will be made to modify the existing interlock to permit valve opening based on reactor vessel pressure instead of pressure differential across the valve. The new interlock pressure setpoint will be selected such that ECC systems design pressure will not be exceeded. Thus, the design will conform with low pressure system isolation specified in Section 6.3 of the Standard Review Plan.

Implementation of this change will also require a review of the effects of delayed injection valve opening on the current ECCS analysis. The Supply System will provide a report of this evaluation along with a description of the final design when completed.

These changes will be incorporated into the plant design during the first refueling outage. Until these changes are made, the Supply System will rely on normal plant surveillance as well as check valve position indication in the control room, alarm on pressure differential across the injection valves and pressure alarms which warn the operator in the control room when pressure upstream of the ECC injection valves exceeds 400 psig.



