

Attachment B

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
NUCLEAR PROJECT NO. 2
DOCKET NO. 50-397
LICENSE NO. CPPR-93
10CFR50.55(e) CONDITION #216
RHR RELIEF VALVE VENTS

INTERIM REPORT

Description of Noncompliance

There are four (4) RHR relief valves which have a 2" Ø vent hole on the valve body. The valves are RHR-V-55A, RHR-V-95A, RHR-V-55B and RHR-V-95B.

These valves are situated such that the failure of a single motor operated valve, RCIC-V-113, would allow an open leakage path from the wetwell (primary containment) directly to the reactor building (secondary containment).

The attached sketch illustrates the situation. Containment penetration X-116 is an open path into the wetwell's gaseous volume. In the steam condensing mode, RHR-V-55A (or B) and RHR-V-95A (or B) protect the RHR heat exchanger from over-pressurization. In order to accommodate condensation in the line between these valves and containment, a vacuum breaker has been installed. That consists of penetration X-116, RCIC-V-113, RHR-V-102, RHR-V-101A (or B), RHR-V-103A (or B), and RHR-V-179A (or B).

All of these valves are normally open. Upon a containment isolation signal, the only valve to close would be RCIC-V-113. If it failed to close, and a LOCA had occurred, the wetwell would pressurize, and the wetwell atmosphere would vent down this path. Details of the RHR relief valves show that a flow path exists which would allow the wetwell atmosphere to vent directly to secondary containment.

Safety Implication

Burns and Roe has estimated the gaseous release from these four paths at 5.2×10^4 scfm during the first 450 seconds after a LOCA and at a rate of 4.9×10^3 scfm thereafter. This can be compared to the allowable release rate for primary containment of approximately 1.7 scfm.

Corrective Action

The manufacturer (Crosby Valve and Gage Co.) has indicated that the valve can be converted to incorporate a bellows seal which would alleviate this problem. After a review of other fixes, the Project has determined to implement the recommended conversion to incorporate a bellows seal. Supply System and Burns and Roe Engineering are preparing the necessary Project Engineering Directives to implement the corrective action. We will continue to provide your office with quarterly updates on this subject. The next report will be submitted by May 17, 1983.



