

REPORTABLE DEFICIENCY AND CORRECTIVE ACTION  
WPPSS NUCLEAR PROJECT NO. 2  
DEFECTIVE TERMINATIONS ON ELECTRICAL PENETRATIONS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM  
DOCKET NO. 50-397  
LICENSE NO. CPPR-93

Description of Deficiency

Defective solder connections were found on pin connectors on penetrations X100, A, B, C, and D. The defects consisted of cold solder joints and lack of adequate solder. The deficiency was noted (April 13, 1978 and documented at the time by a Nonconformance Report (NCR). The NCR was dispositioned April 24, 1978 with corrective procedures provided by the manufacturer. On May 4, 1979, the subject was reported as a deficiency under 10CFR50.55(e) to Region V of the NRC.

Analysis of Safety Implications

The referenced penetrations interconnect the following incore neutron monitoring sensors with their respective conditioning equipment: average power range monitors (APRM), intermediate range monitors (IRM) and source range monitors (SRM). A degraded solder connection for the APRM's and SRM's does not present a safety problem as the failure would be detectable and be in the safe direction. However, with the IRM's, it is conceivable that an increase in resistance across a cold solder connection could go undetected and provide an output that would be in the inverse of the actual output, thus not providing an input to the reactor protection system (RPS) as required.

Corrective Action Taken

The disposition of the NCR include repair and quality control procedures which were provided by Westinghouse to the site organization that will perform the work.

The subject defects are not generic in nature. However, the affect to other facilities is not known.

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