

**Washington Public Power Supply System**

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

October 29, 1981

G02-81-0437

Docket No. 50-397

Mr. R. H. Engelken, Director  
 U. S. Nuclear Regulatory Commission  
 Region V  
 Suite 202, Walnut Creek Plaza  
 1990 North California Boulevard  
 Walnut Creek, California 94596

Dear Mr. Engelken:

Subject: SUPPLY SYSTEM NUCLEAR PROJECT NO. 2  
 10CFR50.55(e) REPORTABLE CONDITION #78  
 MOTORS IN LIMITORQUE DC VALVE OPERATORS  
 WITH CLASS B INSULATION

Reference: (1) G02-80-237, D. L. Renberger to R. H. Engelken,  
 dated October 30, 1980  
 (2) G02-81-0158, R. G. Matlock to R. H. Engelken,  
 dated June 26, 1981

References (1) and (2) reported the subject 10CFR50.55(e) deficiency and provided information on the corrective action to be taken.

Attached is our final report showing the status of our corrective actions taken to resolve the deficiency.

Very truly yours,

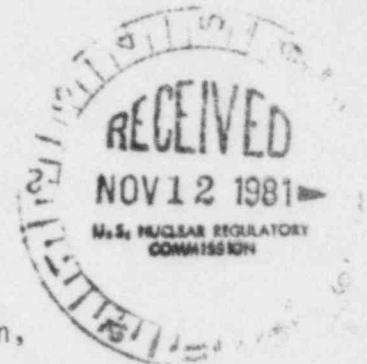


R. G. Matlock  
 Program Director, WNP-2

MFW:kjf

Attachment: Final Report

cc: WS Chin - BPA  
 ND Lewis - EFSEC, Olympia  
 TA Mangelsdorf - BPC 982  
 AI Cygolman - B&R Site 979  
 RE Snaith - B&R NY  
 AD Toth - NRC Resident Inspector  
 JJ Verderber - B&R NY  
 JC Plunkett, Jr. - NUS Corporation  
 A. Schwencer - NRC  
 E. Beckett - Nuc. Projects, Inc.  
 WNP-2 Files



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

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10CFR50.55(e) #78  
REPORTABLE DEFICIENCY AND CORRECTIVE ACTION  
FOR MOTORS IN DC VALVE OPERATORS WITH CLASS B  
INSULATION NOT QUALIFIED TO IEEE-382

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NATURE OF DEFICIENCY

As committed to in our report dated October 30, 1980, a review of all safety-related DC valve operators has been made. The motor operators of five additional valves were found to be not qualified to IEEE Std 382, which is an implementing standard for valve motor operators in order to meet IEEE Std 323. These motor operators are for the following isolation valves:

RCIC-V-10  
RCIC-V-45  
RCIC-V-59

RCIC-V-68  
RHR-V-40

The operators for the above valves have DC motors with Class B insulation and were manufactured by Porter-Peerless. Limitorque has type-tested (to IEEE Std 382) valve operators with Porter-Peerless DC motors having Class H insulation and those with Reliance AC motors having Class B insulation. But no qualification tests have been made for those with DC motors having Class B insulation. It is difficult, if not impossible, to establish qualification of the subject motors by analogy based on the existing type tests alone.

SAFETY IMPLICATIONS

As mentioned in our previous reports, the RCIC system serves as a redundant back-up to the HPCS in the single case of the Rod Drop accident. The RCIC system is also required to maintain reactor water inventory during a reactor hot standby mode and during normal or forced shutdown when feedwater flow is lost. Valve RCIC-V-10 is the RCIC pump suction valve from the condensate tank, which is the normal source of cooling water. RCIC-V-45 is the RCIC turbine steam admission valve, whereas RCIC-V-68 is the turbine exhaust valve to the suppression pool. All the above isolation valves are required for the proper operation of the RCIC system.

RCIC-V-59 is not required for RCIC operation, but needs to be opened during a system test. It serves as a redundant isolation valve for the test line which crosses the pressure boundary. RHR-V-40 is likewise opened during flushing of RHR loop B, prior to shutdown cooling, and is a redundant isolation valve for the flush line which crosses a pressure boundary and which communicates with the reactor during long time reactor cooling conditions.

From the above discussion, it is concluded that the lack of Quality Class I qualification of the motor operators for RCIC-V-10, RCIC-V-45, RCIC-V-59, RCIC-V-68 and RHR-V-40 could jeopardize the safety of plant operations.

#### CORRECTIVE ACTION

As noted in our report dated June 26, 1981, motors for valve operators RCIC-V-10, RCIC-V-45, RCIC-V-59, RCIC-V-68, and RHR-V-40 will be replaced with qualified motors such as Porter-Peerless DC motors with Class H insulation. Purchase orders for procurement of qualified replacement motors from Velan Valve Company and Anchor Darling are in process. Project Engineering Directives PED-218-E-4165 and PED-215-E-A891 have been prepared and will be issued to the Contractors to cover electrical and millwright work to replace the motors. This is our final report on this matter.