

Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000
Docket No. 50-397

July 26, 1983
G02-83-658

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Mr. J. B. Martin
Regional Administrator
U.S. Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

Subject: NUCLEAR PROJECT NO. 2
REPORTABLE 10CFR50.55(e) CONDITION #226, 125VDC MOTOR OPERATOR
CONNECTED TO A 250VDC POWER SOURCE

- References: a. Telecon dated January 7, 1983 (QA2-83-010), L.C. Floyd
to J. Elin.
b. Letter G02-83-87, dated February 2, 1983, R.G. Matlock
to R.H. Engelken.

In accordance with the provisions of 10CFR50.55(e), your office was informed
by telephone, of the above potentially reportable condition. Attachment
I provides the Project's final report on the above condition.

If you have any questions regarding this subject, please contact Roger
Johnson, WNP-2 Project QA Manager, (509) 377-2501, extension 2712.

[Handwritten signature]

C. S. Carlisle
Program Director, WNP-2

LCF/kd

Attachment: Final Report

- cc: W.S. Chin, BPA
N.D. Lewis, EFSEC
A. Toth, NRC Resident Inspector
Document Control Desk, NRC

Attachment I

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
NUCLEAR PROJECT NO. 2
DOCKET NO. 50-397
LICENSE NO. CPPR-93
10CFR50.55(e) CONDITION #226
125VDC MOTOR OPERATOR CONNECTED TO 250VDC POWER SOURCE

Final Report

Description of Deficiency

The 125 Volt DC motor operator for valve RCIC-V-69, as installed, represents a nonconforming condition to the design in that the nameplate voltage (125 Volt DC) is incorrect and inconsistent with the design voltage specified (250 Volt DC).

This inconsistency was originally discovered by the Architect Engineer (AE) while reviewing vendor drawings submitted for approval. This inconsistency was evaluated as a noncompliance, but not reportable under 10CFR50.55(e). However, as the nonconforming motor operator was not returned to the vendor and was in fact installed, this does constitute a reportable condition under the provisions of 10CFR50.55(e).

Analysis of Safety Implication

In the highly unlikely event that any one or all of the startup functional test programs would not have detected the noncompliance, the following safety significant condition would result.

RCIC-V-69 is designed to provide containment isolation and vacuum pump discharge valving to the suppression pool. Failure of the valve in the open position would degrade primary containment isolation capability. However, containment integrity would not be violated, since a check valve is located outboard from RCIC-V-69. The condition would be a violation of containment isolation criteria and would be considered reportable.

Failure of the valve in the closed position would eliminate vacuum to the barometric condenser. This vacuum loss would prevent and/or terminate RCIC turbine operation. The reactor core isolation cooling system is designed to maintain or supplement reactor vessel water inventory during the following conditions:

1. Normal Operation - When the reactor vessel is isolated from its primary heat sink (the main condenser) and maintained in the hot standby condition.
2. Normal Operation - When the reactor vessel is isolated and accompanied by a loss of normal coolant flow from the reactor feedwater condition.
3. When required as a backup to the High Pressure Core Spray System to mitigate the consequences of the rod drop accident by automatically supplying cooling water to the reactor if vessel low water is sensed.

Due to item 3 above, the failure would be considered reportable.

Cause

Failure on the part of the AE to correctly specify name plate voltage that is compatible with design bus voltage. 125VDC motor operated valves were designed such that they were powered by a 250VDC power source.

Corrective Action

A new motor operator has been ordered for RCIC-V-69, and Nonconformance Report NCR-020634 has been initiated to identify the nonconforming condition.

Action to Prevent Recurrence

A 100% review and field inspection has been performed on DC motor operated valves. This action consisted of a field review to confirm what voltage valve is installed and what voltage power source is supplied to the valve. The AE then reviewed the field inspection data to determine if the power supplies were appropriate for the valve design voltage and to ensure the proper voltage valve was installed for the application. As a result of the review and field inspection, one additional valve, RCIC-V-19, was identified as not being compatible; all other valves are compatible. RCIC-V-19 has been identified on Nonconformance Report NCR 20632, and a new motor has been ordered to replace the existing one.

In addition to the review of the DC motor operated valves, all AC motor operated valves were reviewed to ensure design voltage to nameplate voltage compatibility. This review has determined that all AC motor operated valves are compatible for 460VAC, 3 phase operation.