



Burns and Roe, Inc.

601 Williams Blvd. ■ Richland, Washington 99352 ■ Tel. (509) 943-8200

Subject: Work Order 3900/4000
Washington Public Power Supply System
WNP-2
Incorrect Installation of Solenoid Operated
Containment Isolation Valves
Responds to: N/A

December 9, 1983
BRGO-RO-83-18
Response Req'd: N/A

Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Director

Dear Sir:

This letter is to report to you a condition we have deemed to be reportable under 10CFR21. The condition relates to incorrect orientation of solenoid operated containment isolation valves and was discussed with Mr. D. Haist of your Region V office on December 9, 1983.

Complete details are contained in the attached report.

If you have any questions, please contact W. G. Conn at (509) 943-8241.

Very truly yours,

W. G. Conn
Licensing Supervisor

WGC/sw
Attachment

cc: BPA - Mr. W. S. Chin
SS - Mr. G. L. Gelhaus, w/a
SS - Mr. L. T. Harrold, w/a
SS - Mr. J. G. Tellefson, w/a
SS - Mr. R. T. Johnson, w/a
NRC - Mr. J. B. Martin, w/a

Region V

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INCORRECT INSTALLATION OF
SOLENOID OPERATED CONTAINMENT
ISOLATION VALVES #83-23

Description of Deficiency

Several small solenoid operated primary containment isolation valves were found installed such that containment pressure would act to unseat the valve. Thus, during a design basis isolation event, these valves would leak excessively.

Date and Method of Discovery

This deficiency was first identified to Burns and Roe on November 15, 1983. Excessive valve leakage was originally identified by the Supply System Test and Startup organization during local leak rate testing as required by 10CFR50 Appendix J some two weeks earlier.

Safety Implication

Excessive Isolation Valve leakage during a design basis isolation event could result in exceeding 10CFR50 limits regarding radiation dose at the Site boundary.

Cause of Deficiency

The cause of this deficiency is that Burns and Roe, Inc. did not provide sufficient instructions to the installation contractors to assure proper orientation of the valves. However, this was due, in large part, to the sequence of design, procurement and installation. That is, the installation contractors were also responsible for procurement of the isolation valves in accordance with general specification requirements. The requirement for a specific installation orientation could only be determined after a specific manufacturer and valve type were selected by the contractor. It could be argued that the contractor was responsible for correct orientation since he did the procurement.

Applicability to Other Projects

This type of deficiency is potentially applicable to other projects. However, 100 percent functional (leakage) testing as required by 10CFR50 Appendix J would preclude it from remaining undetected. That is, all incorrectly installed solenoid operated isolation valves would be identified due to excessive leakage and would be corrected.

Action to Prevent Recurrence

A complete review of the installed orientation of all solenoid operated containment isolation valves was performed. All deficiencies were identified and corrective action taken through design modification (PED).

Corrective Action

Design Changes (PED's) have been issued to correct the installed orientation for all deficient valves.