Washington Public Power Supply System
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March 7, 1985
G03-85-122

Docket No. 50-508

U. S. Nuclear Regulatory Commission, Region V
Office of Inspection and Enforcement
1450 Maria Lane, Suite 260
Walnut Creek, California 94596-5368

Attention: Mr. D. F. Kirsch, Acting Director
Division of Reactor Safety and Projects

Subject: NUCLEAR PROJECT NO. 3
POTENTIAL 10CFR50.55(e) DEFICIENCY
FAILURE OF BORG-WARNER 2" HPSI HEADER
ISOLATION VALVES (D/N#56)

On February 4, 1985, the Supply System notified your office of a potential 10CFR50.55(e) deficiency concerning the subject condition. A subsequent Engineering/Licensing evaluation has determined that if the deficiencies remained uncorrected they could have affected adversely the safety of operations of the plant. Therefore, the subject condition is reportable in accordance with the provisions of 10CFR50.55(e).

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Attached is a Supply System approved Interim Report. The report provides a description of the deficiency, analysis of safety implications and corrective actions taken/planned. To-date, Ebasco has not received adequate information from Combustion Engineering (CE) to fully address the corrective actions. Upon receipt of the problem resolution from CE and considering available Supply System resources, a final report will be provided to your office. Should you have any questions or desire further information, please contact me directly.

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WNP-3 Program Director

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WASHINGTON NUCLEAR PROJECT NO. 3
(DOCKET NO. 50-508)
10CFR50.55(e) DEFICIENCY
INTERIM REPORT

FAILURE OF BORG-WARNER 2" HPSI HEADER ISOLATION VALVES

DESCRIPTION OF THE DEFICIENCY

Combustion Engineering (CE) reported problems encountered during hot functional testing at an unspecified CE NSSS Unit. The problems concerned High Pressure Safety Injection (HPSI) header isolation valves which permit HPSI pump flow into the Reactor Coolant System. With the HPSI pumps operating, these valves would only open a small portion of the full range of travel (wherein the torque trip was bypassed) but would subsequently trip on high torque without opening further.

Upon investigation, it was determined that the torque requirements were greater than the valve operator spring pack was normally designed to produce. The valve operator assembly, however, was designed for and did withstand all operations including application of motor stall torque, with the exception that the threaded body-to-bonnet connection unscrewed.

WNP-3 utilizes the CE System 80 in its design. The CE supplied valves for this application on WNP-3 were also procurred from Borg-Warner and are similar to the valves which experienced this problem. It can be assumed that similar failures could occur unless corrective measures are taken. The affected WNP-3 valves are:

CE TAG NO	EBASCO TAG NO.	LOCATION (ELEV. 381 RAB)
SI-616	2SI-VQ019 SBR	Penetration #13
SI-617	2SI-VQ020 SAR	Penetration #13
SI-626	2SI-VQ016 SBR	Penetration #14
SI-627	2SI-VQ017 SAR	Penetration #14
SI-636	2SI-VQ013-SBR	Penetration #15
SI-637	2SI-VQ014 SAR	Penetration #15
SI-646	2SI-VQ008 SBR	Penetration #16
SI-647	2SI-VQ009 SAR	Penetration #16

ANALYSIS OF THE SAFETY IMPLICATIONS

The problems with these HPSI header isolation valves, if left uncorrected, could reasonably be postulated to adversely affect the safety of the plant, since these valves are active and must open post-LOCA to allow HPSI pump flow into the Reactor Coolant System. This deficiency, therefore, is considered reportable under the criteria of 10CFR50.55(e).

CORRECTIVE ACTIONS

When the problems were originally discovered at the unspecified CE NSSS Unit, the following steps were taken:

- The opening torque switch light was bypassed.
- The affected utility elected to tack weld the valve yoke to the valve body.

It is not known, at this time, when CE and the valve vendor (Borg-Warner) will establish the solution to this problem and the schedule for its resolution. A final report will be prepared as soon as this information is received from CE.