PSE&G

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Nuclear Department

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NLR-N93080

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

IN-SERVICE TESTING REQUIREMENTS RELIEF REQUEST,
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354

Pursuant to the provisions of 10CFR50.55a(g)(5)(iii), and in accordance with Technical Specification 4.0.5.a for the Hope Creek Generating Station, Public Service Electric & Gas Company (PSE&G) hereby submits, in Attachment 1, an In-Service Testing (IST) requirements relief request. This request fulfills a PSE&G commitment stated PSE&G's License Change Request (LCR) 92-06, SRV Testing Requirements, letter number NLR-N93054, dated May 21, 1993, to provide a request for exemption to the IST Program's ASME B&PV Code requirements .

Should you have any questions regarding this request, we will be pleased to discuss them with you.

Sincerely,

J. J. Hagan
Vice President -
Nuclear Operations

Attachment

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ATTACHMENT 1
IN-SERVICE TESTING REQUIREMENTS RELIEF REQUEST

FACILITY OPERATING LICENSE NPF-57
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

NLR-N93080
IST RELIEF REQUEST V-27

COMPONENTS:

Main Steam Safety Relief Valves 1SNPSV-F013A-E*, 1ABPSV-F013F, 1ABPSV-F013G, 1ABPSV-F013H, 1ABPSV-F013J, 1ABPSV-F013K, 1ABPSV-F013L, 1ABPSV-F013M, 1ABPSV-F013P and 1ABPSV-F013R.

CATEGORY:

These 14 two-stage Target Rock valves are Category C safety relief valves (SRVs).

TEST REQUIREMENTS FOR WHICH RELIEF IS REQUESTED:

The valves listed above are currently set point tested in accordance with Technical Specification 4.4.2.2, which requires that at least 1/2 of the SRVs be removed and set point tested once per 18 months. PSE&G's License Change Request (LCR) 92-06, however, proposes to have only the pilot stage portion of the SRVs tested in accordance with Specification 4.4.2.2, and establishes a new Specification 4.4.2.3 for the main (mechanical) portion of the SRV. This new Specification requires set point testing of the mechanical portion of the SRV at least once every five years. However, the more conservative Specification 4.0.5, which delineates the In-Service Testing (IST) Program's ASME B&PV Code Section XI, IWV-3511, Table IWV-3510-1, testing frequency, requires that 1/3 of the mechanical portion of the SRVs be tested every 18 months. Therefore, PSE&G is requesting relief from the aforementioned ASME B&PV Code, Section XI testing frequency currently required by the IST Program and Specification 4.0.5.

BASIS FOR RELIEF:

Hope Creek UFSAR Section 5.2.2.4.2.1.3 discusses the testing frequency of the SRVs. The UFSAR states that Hope Creek "can

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*Valve component ID in Managed Maintenance Information System (MMIS). The IST Program submittal lists these valves by the component ID 1ABPSV-F013A-E.

achieve optimum SRV operability by disassembly of the pilot section of at least 50 percent of the operating SRVs after each cycle." Additionally, this section of the UFSAR states that General Electric Service Information Letter 196 (SIL 196) will be used to enhance valve operability. Recommended action #2 of SIL 196, Supplement 14, states that, "Refurbishment of the pilot disc and seat should be performed at least once every other outage or every three years, whichever comes first, or if the as received condition indicates that a sticking pilot disc to seat condition exists."

It is evident from the above, that the concern about SRV operability centers on the pilot portion of the valve performing its intended function. A review of NRC Information Notices 82-41, 83-39, 83-82, 86-12 and 88-30 supports the fact that the pilot portion of these valves requires diligent testing. The following synopsis provides a further explanation of the valve stage functions.

The Hope Creek Main Steam SRVs are of a two-stage valve design. The first stage (pilot stage) utilizes a spring loaded pilot disc to sense the set pressure and a pressure loaded stabilizer disc to sense the reseat pressure. Spring force (preload force) is applied to the pilot disc by means of the pilot rod. Thus, the adjustment of the spring preload force will determine the set pressure of the valve. The second stage (main stage) is tightly seated by the combined forces exerted by the preload spring on the main disc and the system internal pressure acting over the area of the disc. In the closed position, the static pressures will be equal in the valve inlet nozzle and in the chamber over the main stage position. This pressure equalization is made possible by the internal passages provided (i.e., piston ring gap, vent hole, drain groove and stabilizer disc seat). When the system pressure increases to the valve set pressure, pilot stage operation will vent the chamber over the main stage piston to the downstream of the valve via internal porting. This venting produces a differential pressure across the main stage piston in a direction tending to unseat the valve. The main stage piston is sized such that the resultant opening force is greater than the combined spring preload and system pressure seating force.

Therefore, it can be seen that the true setpoint adjustment (and operability determination) of the valve is contained within the pilot portion of the SRV. By applying the SRV testing frequency required by the ASME B&PV Code to the pilot portion (achieved by meeting Specification 4.4.2.2), set point accuracy and pilot sticking verification can be maintained, providing an acceptable level of safety. Testing of the main body (mechanical portion), which contains only the main disc, piston rings and a preload spring which is non-adjustable, at the ASME B&PV Code specified testing frequency will not result in a significant increase in the level of safety . However, testing of the mechanical portion of the SRVs to provide verification of blowdown and flow rates

will be conducted at least once every five years when the valves are tested as a complete assembly.

ALTERNATE TESTING:

PSE&G proposes to set point test the main (mechanical) portion of the SRVs to verify blowdown and flow rates at least once every 5 years.