UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE INSERVICE TESTING PROGRAM RELIEF REQUEST

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

HOPE CREEK GENERATING STATION

DOCKET NUMBER 50-354

1.0 INTRODUCTION

The Code of Federal Regulations, 10 CFR 50.55a, requires that inservice testing (IST) of certain American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Class 1, 2, and 3 pumps and valves be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda, except where relief has been requested and granted or proposed alternatives have been authorized by the Commission pursuant to 10 CFR 50.55a(f)(6)(i), (a)(3)(i), or (a)(3)(ii). In order to obtain authorization or relief, the licensee must demonstrate that: (1) conformance is impractical for its facility; (2) the proposed alternative provides an acceptable level of quality and safety; or (3) compliance would result in a hardship or unusual difficulty without a compensating increase in the level of quality and safety. Section 50.55a(f)(4)(iv) provides that inservice tests of pumps and valves may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in 10 CFR 50.55a(b), subject to the limitations and modifications listed, and subject to Commission approval. NRC guidance contained in Generic Letter (GL) 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," provided alternatives to the Code requirements determined to be acceptable to the staff and authorized the use of the alternatives in Positions 1, 2, 6, 7, 9, and 10 provided the licensee follow the guidance delineated in the applicable position. When an alternative is proposed which is in accordance with GL 89-04 guidance and is documented in the IST program, no further evaluation is required; however, implementation of the alternative is subject to NRC inspection.

Section 50.55a authorizes the Commission to grant relief from ASME Code requirements or to approve proposed alternatives upon making the necessary findings. The NRC staff's findings with respect to granting or not granting the relief requested or authorizing the proposed alternative as part of the licensee's IST program are contained in this Safety Evaluation (SE).

In the rulemaking to 10 CFR 50.55a effective September 8, 1992, (see FEDERAL REGISTER dated August 6, 1992, 57 FR 34666), the 1989 Edition of ASME Section XI was incorporated in 10 CFR 50.55a(b). The 1989 Edition provides that the rules for IST of pumps and valves shall meet the requirements set forth in ASME Operations and Maintenance Standards Part 6 (OM-6), "Inservice Testing of Pumps in Light-Water Reactor Power Plants," and Part 10 (OM-10), "Inservice Testing of Valves in Light-Water Reactor Power Plants." Pursuant to 50.55a (f)(4)(iv), portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met, and subject to Commission approval. Because the alternatives meet later editions of the Code, relief is not required for those inservice tests that are conducted in accordance with OM-6 and OM-10, or portions thereof, provided all related requirements are met. Whether all related requirements are met is subject to NRC inspection.

The licensee submitted an untitled relief request in a letter dated December 20, 1993. The submittal requests relief from the Code testing requirements for 8 check valves installed as part of the modification to the reactor vessel level instrumentation. This modification was installed to address NRC Bulletin 93-03, "Resolution of Issues Related to Reactor Vessel Water Level Instrumentation in BWRs." An evaluation of the relief request is included below.

The licensee is currently in its first ten-year IST interval which runs from December 20, 1986 to December 20, 1996. The licensee's IST program is based on the 1983 Edition of ASME Section XI through the Summer 1983 Addenda.

2.0 RELIEF REQUEST

The licensee has requested relief from the exercise frequency requirements of ASME Section XI, Paragraph IWV-3521, for the check valves installed as a part of the modification to address NRC Bulletin 93-03. The licensee has proposed to exercise these check valves closed every 18 months.

1BBV232	1BBV246
1BBV233	1BBV247
1BBV239	1BBV253
1BBV240	1BBV254

3.0 LICENSEE'S BASIS FOR REQUESTING RELIEF

The licensee states:

> "These check valves cannot be exercised during power operations. These valves are in instrument sensing lines that initiate logic circuits or process control parameters that are required during power operation and cold shutdown conditions. Testing of these valves at the 3 month frequency would either disable safety system initiation

logic or unnecessarily challenge safety systems. Testing of these valves at cold shutdown conditions would similarly either disable shutdown safety systems initiation logic or unnecessarily challenge safety systems used f decay heat removal.

These check valves are not 10 CFR 50, Appendix J, Type C tested, nor do they have individual seat leakage acceptance criteria. The pressure boundary is tested as part of the 10 CFR 50, Appendix J, Type A test (i.e. Category C check valves). Relief is therefore requested from these Code requirements."

4.0 ALTERNATE TESTING

The licensee proposes to exercise the valves to the closed position at a frequency of every 18 months.

5.0 EVALUATION

NRC Bulletin 93-03 was issued to alert the owners of BWRs to the potential of loss of inventory in the reference legs of the level measurement systems during rapid depressurization events. To address the bulletin, the licensee has installed small diameter piping from the control rod drive system to each of the 4 reactor water level instrumentation reference legs. Each of the 4 lines contain two check valves installed in series which the licensee has included in their IST program.

The Code requires that check valves shall be exercised every 3 months unless such operation is not practical during plant operation. These valves have a safety function to close to prevent loss of reactor water level indication. The licensee states that testing these valves at power quarterly or during cold shutdowns would disable the safety system level initiation logic used during power operation and cold shutdowns and is therefore impractical.

In the rulemaking to 10 CFR 50.55a effective September 8, 1992, (see FEDERAL REGISTER dated August 6, 1992, 57 FR 34666), the 1989 Edition of ASME Section XI was incorporated in paragraph (b) of 10 CFR 50.55a. The 1989 Edition provides that the rules for IST of valves shall meet the requirements set forth in OM-10. Pursuant to 10 CFR 50.55a(f)(4)(iv), portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met, and subject to Commission approval. The related requirements in this case are paragraph 4.3.2 of OM-10, which allow full-stroke exercising that is not practicable during power operation or cold shutdown to be deferred to refueling outages, and paragraph 6.2(d) of OM-10, which requires that the justification for deferral of check valve exercising be documented in the inservice test plan. Therefore, relief is not required for those inservice tests that are conducted in accordance with OM-10, or portions thereof. Whether all related requirements are met is subject to NRC inspection.

6.0 CONCLUSION

Approval to exercise the check valves, installed in the reactor vessel level modification, closed at a frequency of every 18 months, is granted pursuant to 10 CFR 50.55a(f)(4)(iv) provided the licensee meets the related requirements of OM-10 which includes Sections 4.3.2 and 6.2(d). Implementation of these requirements is subject to NRC inspection.

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Date: April 15, 1994