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10CFR 50.55a(g)(5)(iii)

August 2, 2001

PSLTR: #01-0078

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Dresden Nuclear Power Station, Units 2 and 3
Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Clarification of Relief Request for Alternate Testing for Main Steam (MS) Safety and Relief Valve Discharge Piping

Reference: Letter from Preston Swafford (Exelon Generation Company, LLC) to U. S. NRC, "Relief Request for Alternate Testing for Main Steam (MS) Safety and Relief Valve Discharge Piping," dated March 30, 2001

In the referenced letter, in accordance with 10 CFR 50.55a, "Code and standards," paragraph (a)(3), Exelon Generation Company (EGC), LLC, requested approval of a proposed alternative to existing American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." Specifically, EGC requested approval for an alternative method to test the Main Steam (MS) safety and relief valve discharge piping. On July 19, 2001, a teleconference was held with members of the Nuclear Regulatory Commission (NRC) and EGC personnel to discuss questions regarding this submittal. Based on this teleconference, the relief request has been revised to include clarifying information. The revised request is attached to this letter. As discussed in the referenced letter, this relief request is a revision of a previously approved relief request. All revisions to the previously approved relief request, including the clarifying information discussed during the July 19, 2001 teleconference, are indicated with revision bars in the attachment.

These requested alternatives are for the third period of the third Inservice Inspection Interval for both Units 2 and 3. For Unit 2, the third Inservice Inspection Interval began on March 1, 1992, and the projected end date is January 19, 2003. For Unit 3, the third Inservice Inspection Interval began on March 1, 1992, and the projected end date is October 31, 2002.

To support a fall 2001 refueling outage for Unit 2, we are requesting approval of these proposed alternatives by October 12, 2001.

A045

Should you have any questions regarding this letter, please contact Mr. Dale Ambler at (815) 416-2800.

Respectfully,

Preston Swafford

Preston Swafford
Site Vice President
Dresden Nuclear Power Station

Attachment: Relief Request, PR-16, "Alternate Testing for Main Steam (MS) Safety and Relief Valve Discharge Piping," Revision 1

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Dresden Nuclear Power Station

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COMPONENT IDENTIFICATION

Code Class: 3
Reference: IWD-5223(f)
IWD-5222
Examination Category: D-B
Item Numbers: D2.ST, D2.OT
Description: Alternate Testing for Main Steam (MS) Safety and Relief Valve Discharge Piping

Component Numbers:

Static Pressure Testing

Unit No.	Drawing	Test Block No.
Unit 2	M-25	2MS01
Unit 3	M-356	3MS01

Operational Pressure Testing

Unit No.	Drawing	Test Block No.
Unit 2	M-25	2MS01
Unit 3	M-356	3MS01

CODE REQUIREMENT

IWD-5223(f) states that for safety or relief valve piping which discharges into the containment pressure suppression pool, a pneumatic test, at a pressure of 90% of the pipe submergence head of water, that demonstrates leakage integrity shall be performed in lieu of the system hydrostatic test which Table IWD-2500 requires once each interval. IWD-2500 also requires a system functional test in accordance with IWD-5222 for all Class 3 piping once each period.

BASIS FOR RELIEF

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (g)(5)(iii), relief is requested on the basis that conformance with the Code requirements is impractical.

The discharge lines on the one Target Rock and four Electromatic Relief Valves (ERV) for DNPS Units 2 and 3 discharge into the Suppression Chamber. The discharge lines terminate in a T-Quencher that is normally submerged. Each of the discharge lines also

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BASIS FOR RELIEF (Con't)

contains two vacuum breakers, one 8" diameter vacuum breaker and one 1" diameter vacuum breaker.

The physical design of the system prevents performance of a complete and meaningful pneumatic test in accordance with IWD-5223(f) for the following reasons:

- The ERV pilot assembly (Figure PR-16.1) cannot be pressurized from the discharge side due to a labyrinth type seal on the stem of the pilot valve disc. This seal will not prevent the leakage of air from the discharge line and therefore would prevent the performance of a flow make-up or pressure decay pneumatic test of the entire relief valve discharge line.

- The design of the Target Rock Valve internals (Figure PR-16.2) includes several seating surfaces that may provide a path for leakage when pressurized from the discharge line. Because no through wall leakage in piping is acceptable the acceptance criteria for such a piping integrity test must be zero leakage (within the accuracy of the instruments used). The smallest seat leakage would cause a failure of the test. Since the purpose of the test is to determine the integrity of the relief valve discharge line and not the quality of the pilot valve seating surface, leakage in the Target Rock Valve pilot seats would give misleading test results.

- No test taps are currently available on the line to allow for the proper pressurization of the relief valve discharge line during testing and for the depressurization of the line upon completion of testing.

- The vacuum breakers are not designed to provide a leak tight seal at such low pressures and therefore provide another leakage path that would prevent the performance of a meaningful test.

In addition to the design restrictions, which prevent complete testing, the test itself gives very little assurance of integrity when one considers the test conditions. For DNPS Units 2 and 3, 90% of the T-Quencher submergence head corresponds to a pressure of approximately 4 psig. The design pressure of the relief valve discharge lines is 550 psig. Therefore a test at 4 psig does not significantly challenge the piping.

Functional testing of the Main Steam Relief Valves is performed by manually opening the relief valves in accordance with DNPS Technical Specifications. During this testing the relief valve discharge line is challenged by a pressure much closer to the design pressure. The radiation levels in the drywell at the power levels associated with relief valve functional testing are prohibitive and prevent drywell entry by plant personnel.

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BASIS FOR RELIEF (Con't)

Therefore a VT-2 examination cannot be performed during the pressurization of the line during relief valve functional testing. Although the line cannot be visually examined during functional testing, significant leaks in the line would be detected by an increase in drywell pressure during the test. In addition, a visual examination of the discharge line performed once each period would verify the integrity of the discharge line.

Based on the above, DNPS requests relief from the ASME Section XI requirements for performing a VT-2 visual examination of the Main Steam Relief Valve discharge piping once each period at nominal operating pressure, and from the requirement to perform a pneumatic test at 90% submergence head on the same lines.

PROPOSED ALTERNATE EXAMINATION

A VT-3 visual examination of the Relief Valve Discharge lines will be performed once each inspection period. This examination will be performed to detect evidence of wear, corrosion, erosion, structural distress, or physical damage on the surface of the piping and components that comprise the Main Steam Relief Valve Discharge System. Indications of discharge line leakage, such as increasing drywell pressure will be monitored during functional testing of the Main Steam Relief Valves.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Inservice Inspection Program for DNPS Units 2 and 3.

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FIGURE PR-16.1

ELECTROMATIC SAFETY/RELIEF VALVE

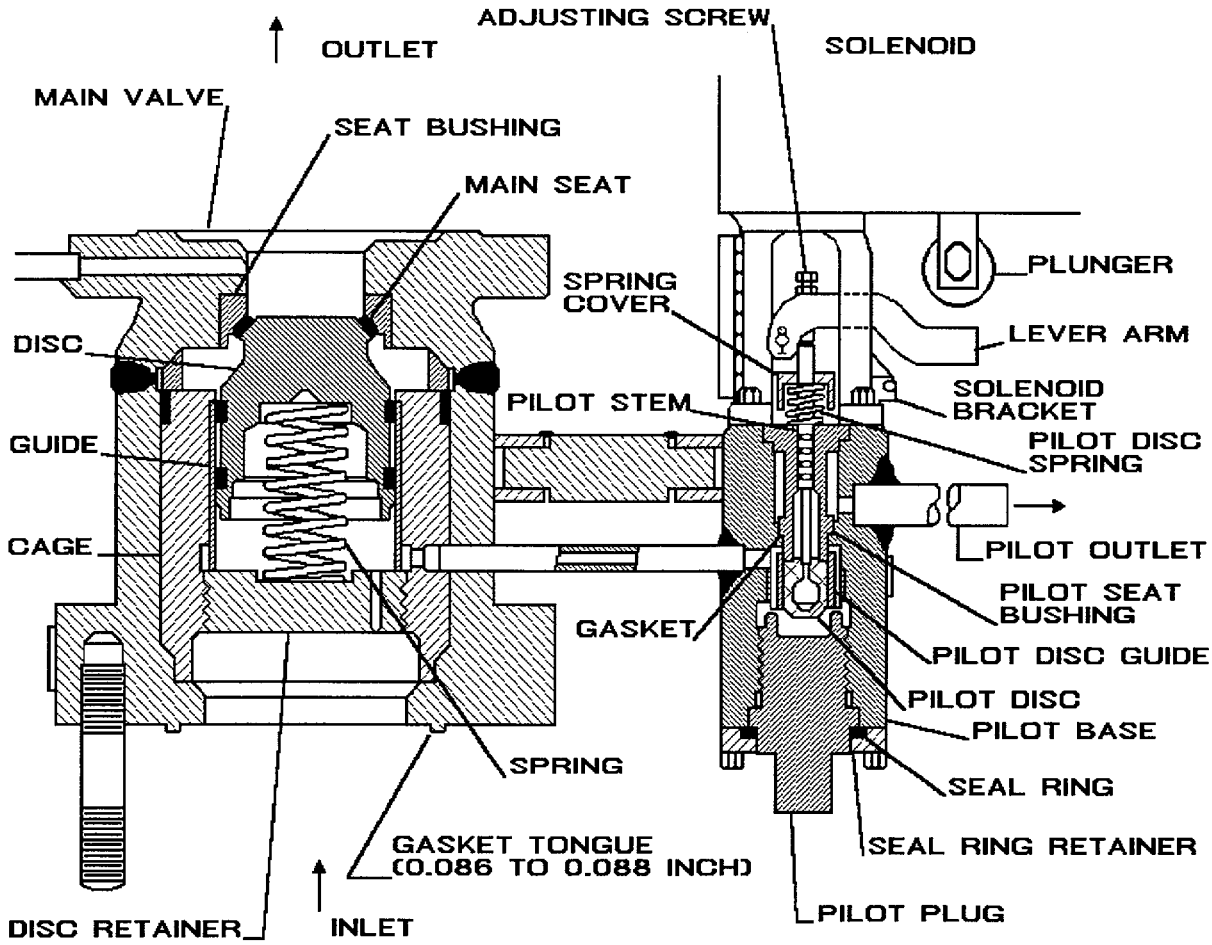

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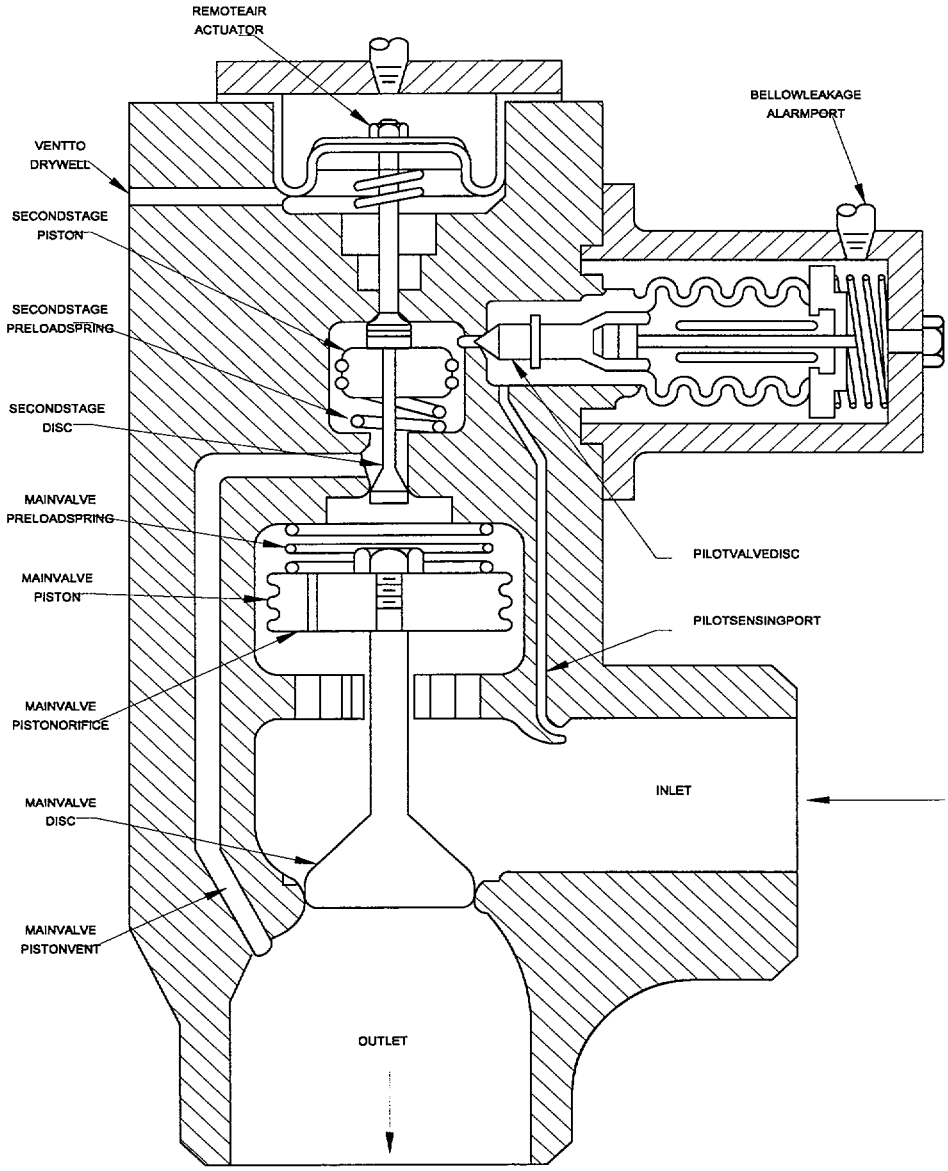
FIGURE PR-16.2

TARGET ROCK SAFETY/RELIEF VALVE