

Exelon Generation Company LLC      www.exeloncorp.com  
Dresden Nuclear Power Station  
6500 North Dresden Road  
Morris, IL 60450-9765

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

March 30, 2001

PSLTR: 01-0036

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

Reference: Letter from USNRC to Mr. D. L. Farr (ComEd), "Evaluation of The Third Ten-Year Interval Inservice Inspection Program and Associated Requests for Relief for Dresden Nuclear Power Station, Units 2 and 3 (TAC M82861, M82862, M82872, and M82873)," dated May 19, 1994

In accordance with 10 CFR 50.55a, "Code and standards," paragraph (a)(3), Dresden Nuclear Power Station (DNPS) is requesting approval of a proposed alternative to existing American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," on the basis that conformance with the Code requirement is impractical as provided for in 10 CFR 50.55a(g)(5)(iii). The requested alternatives involve testing for Main Steam (MS) safety and relief valve discharge piping. The justification for this request is attached and demonstrates that the proposed alternative would provide an acceptable level of quality and safety, as required by 10 CFR 50.55a(3)(i). The attached justification is a revision to a previous relief request approved for DNPS in the referenced letter. The revisions to the previous relief request 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.

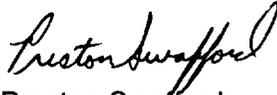
To support a fall 2001 refueling outage for Unit 2, we are requesting approval of these proposed alternatives by October 12, 2001.

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Should you have any questions concerning this letter, please contact Mr. D.F. Ambler at (815) 942-2920 extension 3800.

Respectfully,



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"

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

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**ISI Program Plan**  
**Dresden Nuclear Power Station Units 2 & 3, Third Interval**

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**RELIEF REQUEST NUMBER: PR-16**  
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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

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**BASIS FOR RELIEF** (Con't)

personnel. 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 visual examination of the Relief Valve Discharge lines will be performed once each inspection period. This examination will be performed to detect evidence of cracks, wear, corrosion, erosion, 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.

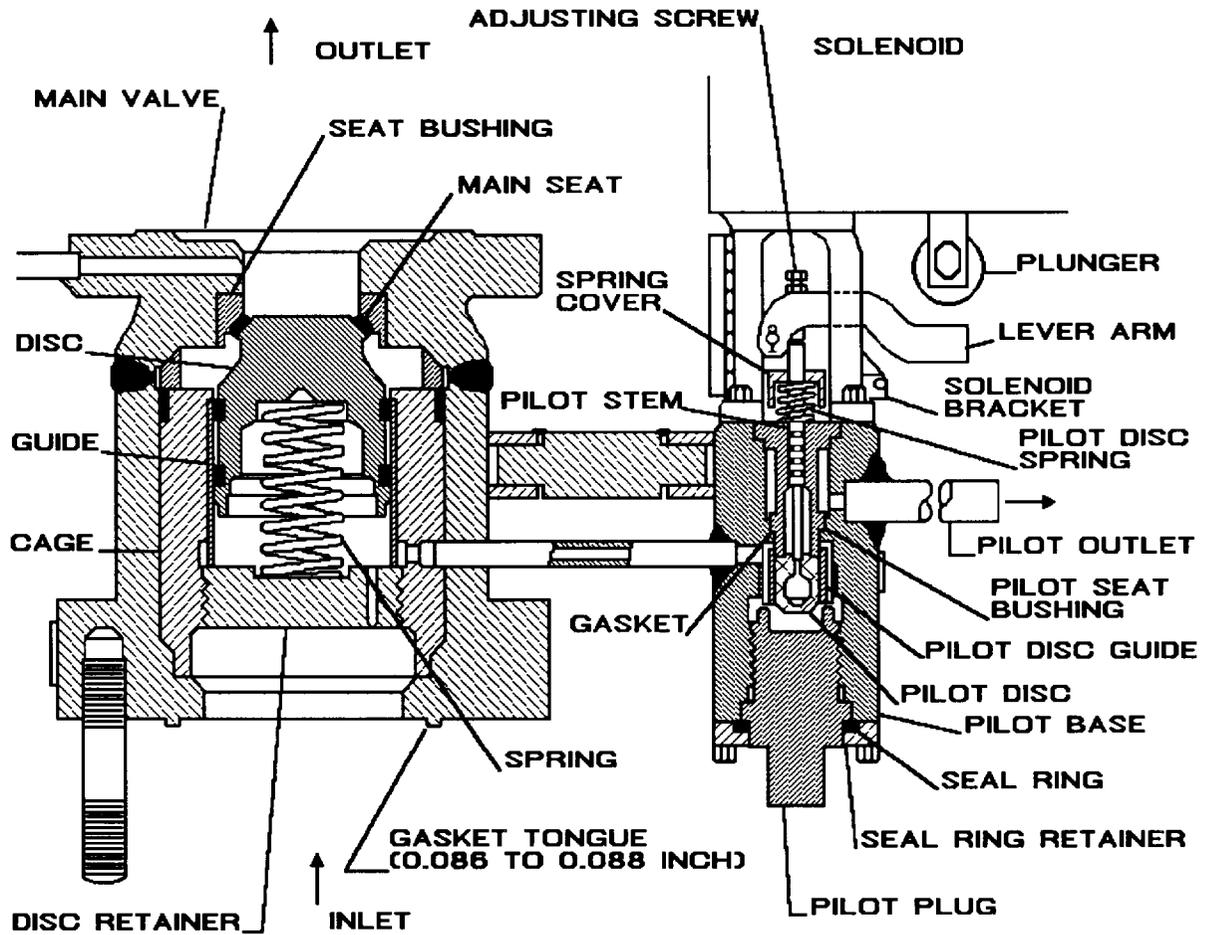
**APPLICABLE TIME PERIOD**

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**

