



Nebraska Public Power District

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NLS2006051
June 15, 2006

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Subject: Revision of Relief Request PR-02
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Reference: Letter to U. S. Nuclear Regulatory Commission from Randall K. Edington (Nebraska Public Power District) dated February 23, 2006, "10 CFR 50.55a Requests for Fourth Ten-Year Inservice Inspection Interval" (NLS2006015).

The purpose of this letter is for the Nebraska Public Power District (NPPD) to provide a revised Relief Request PR-02 submitted by the Reference letter. The Attachment to this letter is Relief Request PR-02 with the clarifications requested by the Nuclear Regulatory Commission (NRC) in a telephone conference on May 22, 2006 between Brian Benney, NRC Project Manager, et. al. and David Van Der Kamp, NPPD Acting Licensing Manager, et. al.

These clarifications have no impact on the reason for the request or the basis for use of the proposed alternative.

Should you have any questions concerning this matter, please contact Paul Fleming, Licensing Manager, at (402) 825-2774.

Randall K. Edington
Vice President - Nuclear and
Chief Nuclear Officer

/em

Enclosure

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cc: Regional Administrator w/attachment
USNRC - Region IV

Cooper Project Manager w/attachment
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/attachment
USNRC – CNS

Nebraska Health and Human Services w/attachment
Department of Regulation and Licensure

NPG Distribution w/o attachment

CNS Records w/attachment

**10 CFR 50.55a Request Number PR-02
Definition of Pressure Retaining Boundary for System Leakage Test**

**Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(ii)
Hardship or Unusual Difficulty without Compensating Increase
in Level of Quality or Safety**

ASME Code Component(s) Affected

Code Class: 1
Examination Category: B-P
Item Number: B15.10
Component Numbers: All Components Subject to Pressurization During a System Leakage Test

Applicable Code Edition and Addenda

ASME Code Section XI, 2001 Edition, 2003 Addenda

Applicable Code Requirement

Paragraph IWB-5222(a)

Article IWB-5000, "System Pressure Tests," Sub-subarticle IWB-5220, "System Leakage Test," Paragraph IWB-5222, "Boundaries," states that:

- (a) The pressure retaining boundary during the system leakage test shall correspond to the reactor coolant boundary, with all valves in the position required for normal reactor operation startup. The visual examination shall, however, extend to and include the second closed valve at the boundary extremity.*
- (b) The pressure retaining boundary during the system leakage test conducted at or near the end of each inspection interval shall extend to all Class 1 pressure retaining components within the system boundary.*

Table IWB-2500-1, Category B-P, Note 2, requires that the system leakage test be conducted prior to plant startup following a refueling outage.

Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards," Paragraph (a)(3), relief is requested from the requirements of ASME Code Section XI requirements for performing a system leakage test using the boundaries stated in Paragraph IWB-5222(a) because performing the pressure test with this boundary would result in a hardship without a compensating increase in quality and safety due to excessive radiation exposure and personnel safety concerns (temperature levels in the drywell).

10 CFR 50.55a Request Number PR-02 (Continued)
Definition of Pressure Retaining Boundary for System Leakage Test

Proposed Alternative and Basis for Use

In lieu of a system leakage test during reactor startup, as required by IWB-5222(a), a system pressure test is performed at the pressure associated with 100% rated reactor power.

- a) The outboard Feedwater check valves and the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) injection check valves are the Class 1 boundary valves and are closed for this test. The Feedwater check valves are normally open for reactor startup. The inboard check valve (FW-CV-16CV) on one feedwater line is kept open by Reactor Water Cleanup (RWCU) flow. The RWCU system is kept in service during the pressure tests. Thus the outboard Feedwater check valve and the RCIC injection check valve on this line will be pressurized during this test. The portion of piping between the other two Feedwater check valves including the HPCI injection line will not be pressurized.
- b) The four outboard Main Steam Isolation Valves (MSIV) will be closed for the system pressure test and the ten-year system pressure test [IWB-5222(b)]. The inboard MSIVs are opened to pressurize the system to the outboard valves. Both Main Steam Drain Valves are open for pressure control. The outboard valves are the Class 1 boundary valves.
- c) Both HPCI and both RCIC steam supply valves will be closed for the system pressure test following a refueling outage. These valves close automatically on low steam supply pressure. During the ten-year system pressure test [IWB-5222(b)], the system will be pressurized to the outboard valves. The outboard valves are the Class 1 boundary valves.

The position of the valves for the system leakage test as described above is consistent with the intent of IWB-5222(a). Abnormal lineups and installation of jumpers is not required for the system leakage test. The valves described above are normally open during a reactor startup. In order to pressurize the reactor coolant pressure boundary for testing, these valves must be closed. Except as described above, the Class 1 boundary is pressurized as required by the code. The VT-2 inspection includes the entire reactor coolant pressure boundary.

Since the portions of the piping between the valves described above are operated at or above reactor pressure during normal operation, any through-wall leakage would be detected by the drywell leakage collection system, or by operations personnel on normal rounds.

10 CFR 50.55a Request Number PR-02 (Continued)
Definition of Pressure Retaining Boundary for System Leakage Test

Performing a system pressure test at 100 percent reactor power would result in a hardship without a compensating increase in quality and safety. At 100% power primary containment is inerted and radiation levels are high. The proposed alternative provides reasonable assurance of operational readiness of the subject components.

In summary, three of the Feedwater Check valves, HPIC injection check valve, the outboard MSIVs, and the HPCI and RCIC steam supply valves will be closed during the system leakage test, but will be included in the VT-2 visual examination. A VT-2 examination will be performed during the system leakage test at a pressure not less than that associated with 100% rated reactor power and will provide reasonable assurance of the continued operational readiness of mechanical connections, extending to the Class 1 boundary. In addition, once at or near the end of the inspection interval the system leakage test shall extend to the Class 1 boundary as required by IWB-5222(b).

Based on the above, NPPD requests relief from the ASME Section XI requirements for performing a system leakage test using the boundaries stated in IWB-5222(a).

Duration of Proposed Alternative

This proposed alternative will be used for the entire fourth ten-year interval of the ISI Program for CNS.

Precedents

PR-02, Revision 2, was previously approved by the NRC for the third ten-year interval for CNS on October 23, 1997 (TAC No. M94000).

References

1. NPPD Letter NLS950157 to USNRC, "Third Ten-Year Interval Inservice Inspection Program," dated October 18, 1995.
2. USNRC letter to NPPD, "Cooper Nuclear Station - Request for Additional Information Regarding Third Ten-Year Interval Inservice Inspection Program," dated February 8, 1996 (TAC No. M94000).
3. NPPD Letter NLS960050 to USNRC, "Response to Request for Additional Information and Submittal of Revision 1 to the Third Ten-Year Interval Inservice Inspection Program," dated April 11, 1996.
4. USNRC letter to NPPD, "Cooper Nuclear Station - Request for Additional Information Regarding Third Ten-Year Interval Inservice Inspection Program (TAC No. M94000)," dated June 3, 1996.

5. NPPD Letter NLS960131 to USNRC, "Response to Request for Additional Information Regarding Revision 1 to the Third Ten-Year Interval Inservice Inspection Program (TAC No. M94000) and Withdrawal of Request for Relief RI-23," dated August 5, 1996.

