



**Nebraska Public Power District**  
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10 CFR 50.55a

NLS2012001  
January 16, 2012

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

Subject: 10 CFR 50.55a Request Number RI-07, Revision 0  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Dear Sir or Madam:

The purpose of this letter is to request the Nuclear Regulatory Commission (NRC) grant Nebraska Public Power District (NPPD) relief from certain inservice inspection (ISI) code requirements for Cooper Nuclear Station (CNS) pursuant to 10 CFR 50.55a.

The attached 10 CFR 50.55a request is applicable to the fourth ten-year ISI interval, which began March 1, 2006. Approval of this request is not needed to support currently scheduled work at CNS. As such, NPPD requests NRC approval of the request by January 17, 2013, which allows a twelve-month review period.

If you have any questions, please contact David Van Der Kamp, Licensing Manager, at (402) 825-2904.

Sincerely,

Brian J. O'Grady  
Vice President – Nuclear and  
Chief Nuclear Officer

/bk

Attachment

A047  
NRR

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

NPG Distribution w/ attachment

CNS Records w/ attachment

**10 CFR 50.55a Request Number RI-07, Revision 0  
Inspection of RHR Shell Circumferential and Nozzle to Head Welds**

**Relief Request in Accordance with 10 CFR 50.55a(g)(5)(iii)**

**ASME Code Components Affected**

Code Class:	2
References:	IWC-2500, Table IWC-2500-1
Examination Category:	C-A - Pressure Retaining Welds in Pressure Vessels C-B - Pressure Retaining Nozzle Welds in Vessels
Item Number:	C1.10, C2.21
Description:	Shell Circumferential Weld, Nozzle to Head Weld
Component Numbers:	RHR-CA-2A (Shell to Distributor Ring End Top) RHR-CB-1A (Nozzle to Head Top)

**Applicable Code Edition and Addenda**

American Society of Mechanical Engineers (ASME) Code Section XI, 2001 Edition, 2003 Addenda.

**Applicable Code Requirement**

Table IWC-2500-1, Examination Category C-A, Item C1.10 requires 100% volumetric examination of pressure vessel welds as defined by Figure IWC-2500-1.

Table IWC-2500-1, Examination Category C-B, Item C2.21 requires 100% surface and volumetric examination of pressure retaining nozzle vessel head welds as defined by Figure IWC-2500-4(d).

**Impracticality of Compliance**

Pursuant to 10 CFR 50.55a(g)(5)(iii), Nebraska Public Power District has determined that compliance with the code requirements of achieving essentially 100% coverage of the welds listed above is impractical for Cooper Nuclear Station (CNS). The CNS construction permit was issued before the effective date of implementation for ASME Section XI, thus the plant was not designed to fully meet the requirements of inservice inspection. The configuration of the 1A Residual Heat Removal (RHR) heat exchanger shell circumferential weld RHR-CA-2A (shell to distributor ring end top) and nozzle to shell weld RHR-CB-1A (nozzle to head top) prevents 100% examination of the required weld volumes. See attached Figures RI-07-1 and RI-07-2 for configuration details.

**Burden Caused by Compliance**

A major modification to the RHR heat exchanger or replacement would be required in order to improve overall examination coverage. Therefore, obtaining essentially 100% coverage is not feasible or practical.

### **Proposed Alternative and Basis for Use**

In lieu of performing the code-required examinations, CNS proposes to examine the accessible portions of the RHR heat exchanger welds to the extent practical.

The examinations were performed prior to CNS' last refueling outage in March 2011, and in accordance with ASME Section XI using qualified personnel, procedures, and equipment. The magnetic particle examination performed on RHR-CB-1A achieved greater than 90% coverage, however, based on the configurations of these welds, the volumetric examination coverages achieved were 65.1% for RHR-CB-1A (See Figure RI-07-1) and 48.1% for RHR-CA-2A (See Figure RI-07-2). Volumetric examination coverages reported in the previous interval were both over 90% however, the reductions in coverages achieved this interval are attributed to more conservative examination techniques thus providing more reliable results. Using the provisions of this relief request as an alternative to the specific requirements of ASME Table IWC-2500-1, identified above, will continue to provide reasonable assurance of structural integrity since the percent of examination coverage already obtained would have identified any pattern of service induced degradation that may have developed.

### **Duration of Proposed Alternative**

Relief is requested for the fourth ten-year interval of the CNS Inservice Inspection Program ending on February 29, 2016.

### **Precedents**

None.

Figure RI-07-1

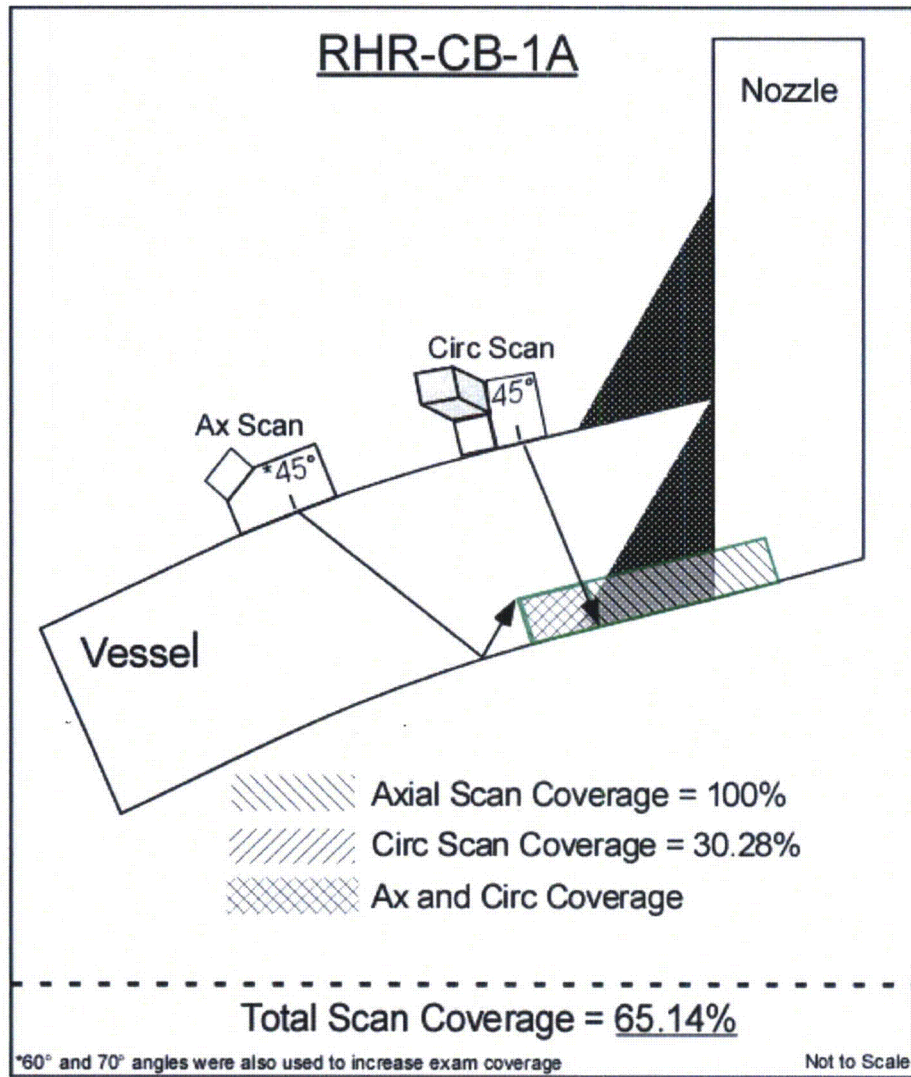
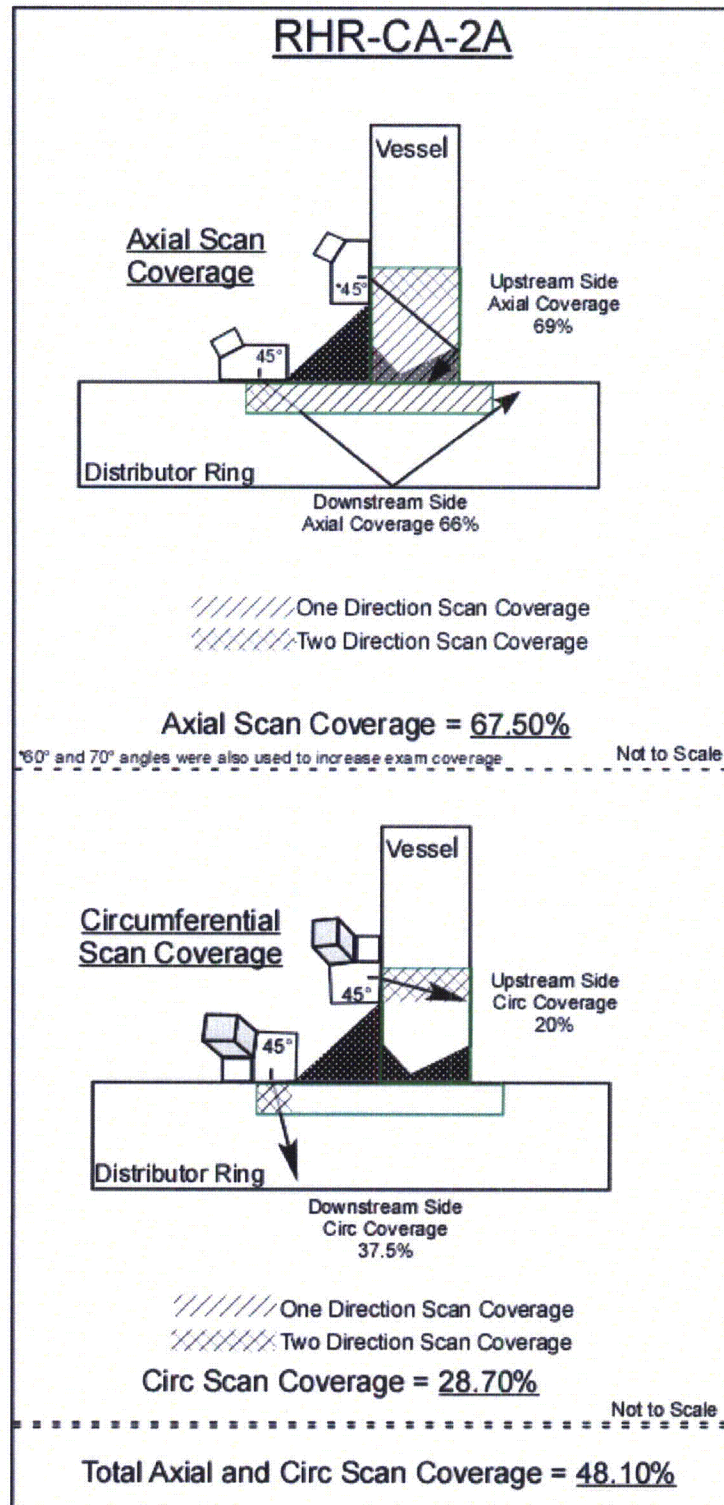


Figure RI-07-2



Correspondence Number: NLS2012001

The following table identifies those actions committed to by Nebraska Public Power District (NPPD) in this document. Any other actions discussed in the submittal represent intended or planned actions by NPPD. They are described for information only and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITMENT NUMBER	COMMITTED DATE OR OUTAGE
None		