



**Nebraska Public Power District**  
Nebraska's Energy Leader

NLS990112  
November 12, 1999

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

Gentlemen:

**Subject:** Inservice Inspection Relief Request PR-04, Revision 1 - Additional Information  
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

**Reference:** Letter (No. NLS990028) to USNRC Document Control Desk from John H.  
Swales (NPPD) dated March 19, 1999, "Inservice Inspection Relief Request, PR-  
04, Revision 1"

In the above reference, the Nebraska Public Power District (District) submitted to the Nuclear Regulatory Commission (NRC) a request for NRC review and approval of the Cooper Nuclear Station (CNS) Inservice Inspection (ISI) Relief Request (RR) No. PR-04, Revision 1. This relief request would permit a pneumatic pressure test, as an alternate means to the hydrostatic test (previously approved by the NRC in PR-04, Revision 0), for the verification of the Reactor Pressure Vessel (RPV) head flange seal leak detection line integrity.

On October 19, 1999 at 10:00 A.M., Central Daylight Time, a telephone conference was held to address NRC Nuclear Reactor Regulation questions concerning the above referenced letter. All of the questions were satisfactorily answered during this telephone conference; however, the NRC requested that the questions and the associated responses be submitted for information on the Docket. As such, please find attached the summary of NRC questions and District answers provided during the telephone communication.

Should you have any questions regarding this matter, please contact me.

Sincerely,

Paul J. Caudill  
Acting Nuclear Licensing & Safety Manager

A047

PDR A0000

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Attachment

cc: Regional Administrator  
USNRC - Region IV

Senior Project Manager  
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector  
USNRC

NPG Distribution

The following is a summary of questions and answers discussed between Nebraska Public Power District (District) and Nuclear Regulatory Commission (NRC) representatives in a Telephone Conference held October 19, 1999 at 10:00 A.M., Central Daylight Time. The specific NRC questions originate from the NRC's ongoing review of the District's relief request submitted per Letter No. NLS990028 to USNRC Document Control Desk from John H. Swailes (NPPD) dated March 19, 1999, "Inservice Inspection Relief Request, PR-04, Revision 1."

#### **NRC Question**

- 1) **Provide the details of the pneumatic test (Option 2 in the relief request) performed on the RPV head flange seal leak detection system during refueling outage 18 (RFO-18). Include details of possible future pneumatic tests of the system that may differ from what was performed during RFO-18 procedure. In addition, provide details of possible future visual inspections with the reactor flooded up (Option 1 in the relief request):**

#### **District's Response**

The pneumatic test was performed per a documented leak test controlled by the Maintenance Work Request process. The insulation was removed. The line was pressurized with air to 100 psig and snooped for leaks. A VT-2 inspection was performed with no visible leaks being detected. It should be noted that PR-04, previously approved by the NRC on October 23, 1997 (TAC No. M94000), allows the hydro test to be performed while the vessel head is off and the cavity is flooded. The intent is to continue to perform the inspection, as originally approved by the NRC, when the reactor cavity is flooded and only perform the pneumatic test as an alternative if scheduling or plant operation would dictate otherwise. The pneumatic test would be performed similarly to how it was performed in RE-18. Future inspections while the reactor is flooded up would require a 4-hour hold time prior to conducting the VT-2 inspection and does not require insulation to be removed therefore reducing time needed to be in the drywell which ultimately reduces dose.

#### **NRC Question**

- a. **Describe the method used to determine whether or not a leak exists using either Option 1 or 2 to conduct the pressure test.**

#### **District Response**

For Option 1, previously approved by the NRC, a VT-2 inspection would be performed when the reactor cavity is flooded. The exam requires a 4-hour hold time before walking the line down because all or portions of the line are insulated. Actual time in the drywell for the VT-2 examiners is reduced significantly from Option 2 reducing dose and risk to the examiners and therefore is the preferred Option.

For Option 2, the insulation is required to be removed and after the line is pressurized the entire line is snoop prior to the VT-2 inspection. Piping insulation removal and reinstallation, and snooping the line adds significant time to the inspection. This option is only requested in the event Option 1 did not get performed.

#### **NRC Question**

- b. Provide the basis for concluding that the pneumatic test is equivalent to a visual inspection with the reactor cavity flooded up.**

#### **District's Response**

The minimum hydro test pressure while the reactor cavity is flooded is based on the flood depth of the cavity when the vessel head is off which is approximately 20 feet of water (8-10 psi) as compared to 100 psi during the pneumatic test. Therefore, the pneumatic test meets or exceeds the ability of the hydro test to detect leakage.

#### **NRC Question**

- 2) Describe the actions that would be taken if a leak were discovered using either Option 1 or Option 2 to pressure test the RPV head flange seal leak detection system.**

#### **District's Response**

The line would be repaired or replaced as necessary in accordance with ASME Section XI, IWA-4000 or IWA-7000, 1989 Edition.

#### **NRC Question**

- 3) Describe what constitutes a "snoop" test.**

#### **District's Response**

A snoop test is a recognized industry term for a soap bubble test. Once the line is pneumatically pressurized, a spray of liquid soap, specifically manufactured for this application, is applied to the connections along the line. If there is any leakage, this will be indicated by the formation of bubbles.

ATTACHMENT 3 LIST OF NRC COMMITMENTS

Correspondence No:  NLS990112

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
None	N/A