

November 21, 2005

Mr. Randall K. Edington  
Vice President-Nuclear and CNO  
Nebraska Public Power District  
P. O. Box 98  
Brownville, NE 68321

SUBJECT: COOPER NUCLEAR STATION - REQUEST FOR ADDITIONAL INFORMATION  
RE: RELIEF REQUESTS RI-21, REVISION 2, AND RI-36 (TAC NO. MC8512)

Dear Mr. Edington:

Nebraska Public Power District (the licensee) requested the Nuclear Regulatory Commission (NRC) staff's approval for relief from certain inservice inspection requirements in Part 50 of Title 10 of the *Code of Federal Regulations* for the Cooper Nuclear Station.

The NRC staff has reviewed the information provided in the September 28, 2005, submittal and has determined that the additional information identified in this enclosure is required in order for the NRC staff to complete its review. The licensee requested NRC staff approval of the subject relief request by February 28, 2006. To meet that target date, the NRC staff requests that the licensee provide its response no later than December 9, 2005.

Sincerely,

**/RA**

Brian Benney, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-298

Enclosure: Request for Additional Information

cc w/encl: See next page

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**NRR-106**

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REQUEST FOR ADDITIONAL INFORMATION  
ISSUES RELATED TO INSERVICE INSPECTION  
RELIEF REQUESTS RI-21, REVISION 2, AND RI-36  
COOPER NUCLEAR STATION  
DOCKET NO. 50-298

By letter dated September 28, 2005, Nebraska Public Power District requested relief from certain inservice inspection requirements in Part 50 of Title 10 of the *Code of Federal Regulations* for the Cooper Nuclear Station. To complete its review, the Nuclear Regulatory Commission (NRC) staff requests the following additional information:

Relief Request Number RI-21, Revision 2

1. Confirm that nozzles NVE-BD-N9 and NVE-BD-N4A&C are the only two components that are affected under Relief Request RI-21, Revision 2. There are 28 nozzles listed in this relief request; however, in the "Basis for Relief" section, the discussion focuses only on nozzles NVE-BD-N4A&C and NVE-BD-N9.
2. The licensee stated that the total volumetric examination coverage of nozzle NVE-BD-N9 was 40 percent. The figure in the attachment to the September 28, 2005, letter does not provide sufficient information regarding how the 40 percent coverage was achieved. Please demonstrate the 40 percent coverage by calculations and diagrams.
3. The submittal stated that the inner radius examination of nozzle NVE-BD-N9 in the third interval achieved 100 percent of the required examination volume. It also stated that the inner 15 percent of the nozzle received 100 percent coverage. Discuss why the volumetric examination can achieve 100 percent coverage in the inner radius region, but only 40 percent coverage was achieved.
4. (A) The submittal stated that "Based on EPRI [Electric Power Research Institute] modeling of the examination volume . . . a higher quality of examination was achieved even though less overall coverage was achieved . . ." Discuss how does the EPRI modeling of the examination volume lead to a higher quality of examination.  
  
(B) The submittal also stated that ". . . the requirement to use only Performance Demonstration Initiative (PDI)-qualified transducers limited the examination to coverage and contributed to a reduction of coverage compared to previous examinations in the outer 85% volume." Discuss whether an approach based on less coverage with a higher quality examination (as opposed to more coverage with a lower quality examination) is appropriate in terms of detecting flaws in the nozzles in the Cooper Nuclear Station.

(C) Discuss the results of previous examinations of nozzle NVE-BD-N9.

5. In a letter dated October 23, 1997, the NRC staff approved Relief Request RI-21, Revision 1. In the NRC staff's safety evaluation contained in that letter, the staff discussed a visual examination, VT-2, associated with inservice inspection of nozzle NVE-BD-N9. Discuss whether the visual examination, VT-2, has been conducted and will be performed for nozzle NVE-BD-N9 in conjunction with the required volumetric examinations.

Relief Request Number RI-36

6. Provide a drawing of the subject welds RVD-BJ-17 and RVD-BJ-18, including the volume that were volumetrically examined, angle and trace of transmitting and receiving signals, and examination interferences.
7. Identify the piping system with which subject welds RVD-BJ-17 and RVD-BJ-18 are associated. Discuss results of the previous volumetric examination of RVD-BJ-17 and RVD-BJ-18.
8. The submittal stated that alternate angles were used; however, due to high signal-to-noise ratios additional coverage could not be achieved. Identify the original transducer angles and alternate angles used. Discuss whether the original angles used in the examination result in high signal-to-noise ratio and whether the examination results were not distorted by the signal-to-noise ratio.
9. The submittal stated that the affected welds in Relief Request RI-36 were selected to be included in risk-informed inservice inspection. Discuss how does Relief Request RI-36 satisfy the relief request guidelines in EPRI TR-112657, Revision B-A, "Revised Risk-Informed Inservice Inspection Evaluation Procedure (PWRMRP-05)," Final Report, December 1999.

Cooper Nuclear Station

cc:

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October 2005