December 3, 2004

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 ON RELIEF REQUEST RI-35, REPAIR OF REACTOR PRESSURE VESSEL CONTROL ROD DRIVE NOZZLE-TO-CAP WELD (TAC NO. MC4954)

Dear Mr. Edington:

By letter dated October 25, 2004, Nebraska Public Power District (NPPD) requested the NRC staff to approve a request for relief as an alternative to the existing ASME Boiler and Pressure Vessel Code, Section XI requirements for the repair and examination of Class 1 welds.

The NRC staff has reviewed the information provided in the submittal and determined that the additional information identified in the enclosure is required in order for the NRC staff to complete its review. As agreed upon with Dave VanDerKamp on December 2, 2004, NPPD will respond to the NRC staff's request for additional information within 30 days from the date of this letter.

Sincerely,

/RA/

Michelle C. Honcharik, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-298

Enclosure: Request for Additional Information

cc w/encl: See next page

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ACCESSION NO: ML043380325 *No substantive changes

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DATE	12/3/04	12/2/04	11/23/2004*	11/18/2004*	12/3/04

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REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST RI-35, REPAIR OF REACTOR PRESSURE VESSEL

CONTROL ROD DRIVE NOZZLE-TO-CAP WELD

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

DOCKET NO. 50-298

1. The October 25, 2004, submittal states that the welder and welding procedures will be qualified to use the shielded metal arc welding process. However, the deposition of the Alloy 52 requires the use of the gas tungsten arc welding (GTAW) process. Is the licensee planning to use welder and welding procedures qualified to use the GTAW process? If so, explain the difference.

2. Provide a diagram/sketch showing the control rod drive return nozzle-to-cap weld and the proposed weld overlay configuration.

3. Section (g)(2) of Code Case N-504-2 specifies that the evaluation of the repaired weld consider residual stresses produced by the weld overlay with the other applied loads on the system. The effects of water backing on the repair weld shall be considered. Section (g)(3) of Code Case N-504-2 specifies that the welds and components meet the applicable stress limits of the construction code.

    a. What is the construction code that was used to satisfy the evaluation requirements in Sections (g)(2) and (g)(3) of the Code Case?

    b. Provide a description of the methodology used to determine residual stresses and shrinkage effects.

    c. Provide a list and a description of the calculations used for determining the length and thickness of the weld overlay.

    d. Provide a table comparing the current licensing basis primary and primary-plus-secondary stresses, and the primary and primary-plus-secondary stresses at the location of the highest stress regions resulting from the installation of the weld overlay. Show that the component and the weld meet the applicable stress limits of the Cooper construction code, as required by the Code Case.

    e. Provide the largest ASME Section III fatigue cumulative usage factor and its location in the region with and without the weld overlay, considering all applicable thermal and mechanical transients.