



Nebraska Public Power District

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NLS2016004
January 13, 2016

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

Subject: Response to Fifth Ten-Year Interval Pump and Valve IST Program Relief Requests Identified Discrepancies
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Reference: Letter from Oscar A. Limpias, Nebraska Public Power District, to the U.S. Nuclear Regulatory Commission, dated March 19, 2015, "Fifth Ten-Year Interval Pump and Valve Inservice Testing Program Relief Requests"

Dear Sir or Madam:

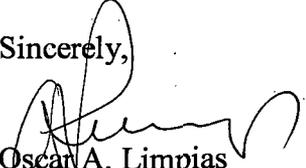
The purpose of this letter is for the Nebraska Public Power District (NPPD) to provide a response to discrepancies identified by the Nuclear Regulatory Commission (NRC) in the referenced letter related to Relief Requests RP-04, RP-05, and RP-07.

The proposed relief requests contain potential errors that were identified during a review by the NRC. The attachment to this letter provides the NPPD response.

This letter does not contain any new regulatory commitments.

If you have any questions concerning this matter, please contact Jim Shaw, Licensing Manager, at (402) 825-2788.

Sincerely,


Oscar A. Limpias
Vice President - Nuclear
and Chief Nuclear Officer

/dv

Attachment: Response to Fifth Ten-Year Interval Pump and Valve Inservice Testing (IST) Program Relief Requests Identified Discrepancies

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cc: Regional Administrator w/ attachment
USNRC - Region IV

Cooper Project Manager w/ attachment
USNRC - NRR Plant Licensing Branch IV-2

Senior Resident Inspector w/ attachment
USNRC - CNS

NPG Distribution w/o attachment

CNS Records w/ attachment

**Response to Fifth Ten-Year Interval Pump and Valve Inservice Testing (IST) Program
Relief Requests Identified Discrepancies**

Cooper Nuclear Station, Docket No. 50-298, DPR-46

The Nuclear Regulatory Commission (NRC) identified potential errors regarding IST Relief Requests RP-04, RP-05, and RP-07 that were submitted for the Fifth Ten-Year Interval. These discrepancies are shown in italics, with the Nebraska Public Power District (NPPD) response shown in normal font.

Relief Request RP-04

The Title and Section 1 identify the Reactor Core Isolation Cooling (RCIC) Pump as the affected component. Section 5 identifies the High Pressure Coolant Injection (HPCI) pumps. It is suspected that the reference to the HPCI pumps is an error. Please confirm that the rest of the information/data provided in that section applies to the RCIC pump (i.e., not HPCI).

NPPD Response

NPPD has reviewed RP-04 and has concluded the reference to the HPCI pumps is an error. The second sentence of Section 5 should state "reactor core isolation cooling" rather than "high pressure coolant injection." The rest of the information and data provided in Section 5 correctly applies to the RCIC pump.

Relief Request RP-05

(a) The 4th paragraph of Section 5 discusses the HPCI pumps flow rate; the fifth paragraph discusses the RCIC pump flow. However, in the last sentence of the RCIC paragraph, the flow rate is indicated to be 6000 gallons per minute (gpm) and the instrument accuracy is identified as 1.66% (same as HPCI). Please confirm the information/data provided in those sections.

(b) The 4th paragraph of Section 5 discusses the HPCI pump flow indicating controller with a range of 0 to 5000 gpm. Whereas, the last few lines of the 4th paragraph use 6000 gpm, which would seem to exceed the flow range.

(c) The 4th paragraph of Section 5, fifth line, discusses the HPCI pump nameplate accuracy $\pm 0.25\%$ from approximately 1000 to 5000 gpm, which does not provide the correct loop accuracy as mentioned in the same paragraph.

(d) The 5th paragraph of Section 5 discusses the RCIC pump flow range as 0 to 500 gpm. Whereas, the last few lines of the 5th paragraph use 6000 gpm.

(e) The 5th paragraph of Section 5, RCIC pump flow indicating controller (FIC-91) nameplate accuracy and flow square rooter (SQRT-99) nameplate accuracy as stated in the request do not provide the correct loop accuracy as mentioned in the same paragraph.

(f) Please confirm the above. Additionally, suggest that NPPD verify all the flows and accuracies in the 4th and 5th paragraphs of RP-05, because they do not match specifically with previous fourth 10-year IST interval program.

NPPD Response

NPPD has reviewed RP-05 and has concluded the following:

(a) The calibration tolerance of ± 10 gpm for the RCIC pump flow loop is $\pm 2\%$ of full scale ($\pm 0.02 \times 500$ gpm = ± 10 gpm) rather than approximately $\pm 1.66\%$ of full scale ($\pm 0.0166 \times 6000$ gpm = ± 100 gpm). The calibration tolerance is equivalent to the $\pm 2\%$ full scale accuracy requirements of the code.

(b) The range of 0 to 5000 gpm is correct for the HPCI flow indicating controller. The flow loop is calibrated to within ± 100 gpm or $\pm 2\%$ of full scale ($\pm 0.02 \times 5000$ gpm = ± 100 gpm).

(c) The HPCI flow square rooter has a nameplate accuracy of $\pm 0.5\%$ (not $\pm 0.25\%$) from approximately 1000 to 5000 gpm. Therefore, the loop accuracy for flow indication is approximately 0.61% [$\sqrt{0.25^2 + 0.25^2 + 0.5^2}$] from 1000 to 5000 gpm as stated in the submitted fifth ten-year interval relief request.

(d) The correct flow range for RCIC is 0 to 500 gpm. The reference to 6000 gpm was incorrectly referenced as discussed under the response to (a), above.

(e) The original intent was to submit the identical relief request for the fifth ten-year interval as was submitted for the fourth ten-year interval. Based on this, the RCIC flow indicating controller had a nameplate accuracy of $\pm 0.25\%$ rather than $\pm 2\%$ and the RCIC flow square rooter had a nameplate accuracy of $\pm 0.5\%$, rather than $\pm 0.25\%$, from 100 to 500 gpm. This would result in the listed loop accuracies of $\pm 2.03\%$ [$\sqrt{0.25^2 + 0.25^2 + 2^2}$] from 0 to 100 gpm and $\pm 0.61\%$ [$\sqrt{0.25^2 + 0.25^2 + 0.5^2}$] from 100 to 500 gpm.

(f) The NRC identified discrepancies listed for RP-05 were a result of NPPD inadvertently submitting a version of RP-05 that did not match the final version that was submitted for the fourth ten-year interval, as intended. Therefore, all discrepancies are considered to be due to an administrative error. These identified discrepancies were documented in the Cooper Nuclear Station (CNS) corrective action program.

In addition, following a more detailed review of the currently installed instrumentation for RCIC, NPPD identified that a design change completed during the fourth ten-year interval installed a highly accurate RCIC flow indicating controller with a built-in square rooter that results in the RCIC flow loop equipment accuracy meeting the American Society of Mechanical Engineers Operation and Maintenance Code requirements. The installation was completed in November of 2012. Therefore, the RCIC pump flow rate loop instrumentation may be withdrawn from RP-05. Since IST personnel were not involved in the review of this design change, a condition report was documented in the CNS corrective action program to address this administrative issue.

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Attachment

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Relief Request RP-07

Relief Request RP-07, Core Spray Pump B Vibration Alert Limits was requested as a proposed alternative that provides an acceptable level of quality and safety per 10 CFR 50.55a(z)(1). The NRC's position is that it is more appropriate to request relief per 10 CFR 50.55a(z)(2) as an undue hardship without a compensating increase in level of quality and safety.

NPPD Response

NPPD concurs with revising the basis of the relief request as an undue hardship without a compensating increase in level of quality and safety per 10 CFR 50.55a(z)(2).