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50.55a

NLS2012057  
June 22, 2012

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

**Subject:** Response to Nuclear Regulatory Commission Request for Additional Information  
Re: Relief Request RV-01 Revision 1 (TAC No. ME7021)  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

- References:**
1. Letter from Lynnea E. Wilkins, U.S. Nuclear Regulatory Commission, to Brian J. O'Grady, Nebraska Public Power District, dated June 11, 2012, "Cooper Nuclear Station - Second Request for Additional Information Re: Request for Relief for the Fourth 10-Year Pump and Valve Inservice Testing Program (TAC NO. ME7021 )"
  2. Letter from Brian J. O'Grady, Nebraska Public Power District, to the U.S. Nuclear Regulatory Commission, dated August 24, 2011, "10 CFR 50.55a Request Numbers RV-07, Revision 0, and RV-01, Revision 1"

Dear Sir or Madam:

The purpose of this letter is for Nebraska Public Power District to submit a response to a request for additional information (RAI) from the Nuclear Regulatory Commission (NRC) (Reference 1). The RAI requested information in support of NRC's review of a 10 CFR 50.55a relief request for the Cooper Nuclear Station (CNS) concerning the High Pressure Coolant Injection Pump and Valve Fourth 10-Year Interval Inservice Testing Program (Reference 2).

Responses to the specific RAI questions are provided in the Attachment to this letter. No regulatory commitments are made in this submittal. If you have any questions concerning this matter, please contact David Van Der Kamp, Licensing Manager, at (402) 825-2904.

Sincerely,

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

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NRK

/em

Attachment: Response to Nuclear Regulatory Commission Request for Additional Information  
Re: Relief Request RV-01 Revision 1 (TAC No. ME7021)

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/o attachment

CNS Records w/ attachment

**Attachment**

**Response to Nuclear Regulatory Commission Request for Additional Information  
Re: Relief Request RV-01 Revision 1 (TAC No. ME7021)**

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

NRC Question #1

*Please describe any significant differences in the operational conditions and the relative physical locations to each other for HPCI-SOV-SSV64 and HPCI-SOV-SSV87.*

Response

There are no significant differences in the operational conditions for solenoid operated valves (SOV) HPCI-SOV-SSV64 and HPCI-SOV-SSV87. The two valves are in parallel 1" drip leg drain lines that come off the 2" drip leg piping. Flow downstream of HPCI-SOV-SSV64 enters the High Pressure Coolant Injection (HPCI) gland seal condenser and is prevented from continuing on downstream to the Torus by two closed containment isolation valves. Flow downstream of HPCI-SOV-SSV87 would pass through non-essential SOV, HPCI-SOV-SSV88, onward to an equipment drain.

Based on Cooper Nuclear Station (CNS) isometric drawing, X-2614-200, the physical locations of these two valves are approximately 15" apart, at the same elevation.

NRC Question #2

*Please provide the reason for the replacement of HPCI-SOV-SSV87 in June 2005.*

Response

Initially, non-essential SOV, HPCI-SOV-SSV88, was being disassembled when the valve body insert was identified as "frozen in place." Maintenance personnel were unable to remove the valve body insert and visually inspect it as instructed by the preventive maintenance (PM) instructions. The system engineer recommended the valve be replaced online during a future HPCI work window. The remainder of the PM was completed and the replacement valve was verified to function correctly.

Due to the close proximity of the HPCI-SOV-SSV87 and HPCI-SOV-SSV88 valves (currently 6" centerline to centerline), which are in series and welded, CNS decided that the HPCI-SOV-SSV87 valve would also be replaced at the same time as HPCI-SOV-SSV88. However, there were no functional issues associated with HPCI-SOV-SSV87. Since the three SOVs (SSV64, SSV87, and SSV88) were identical in design and only different in end-use application, a part evaluation was performed to demonstrate the replacement valve would perform acceptably in the essential locations of HPCI-SOV-SSV87 and HPCI-SOV-SSV64 in addition to the non-essential

location of HPCI-SOV-SSV88. The HPCI-SOV-SSV87 and HPCI-SOV-SSV88 valves were both replaced in June of 2005.

NRC Question #3

*The licensee's letter dated August 24, 2011, states, in part, that, "For instance, solenoid valve, HPCI-SOV-SSV87, was replaced in June 2005, and has had an acceptable disassembly and examination completed in November 2006, March 2008, August 2009, and March 2011." Please provide the acceptance criteria and results for these four examinations of HPCI-SOV-SSV87 and describe any future acceptance criteria changes for HPCI-SOV-SSV64 and HPCI-SOV-SSV87.*

Response:

In-service Test examination acceptance criteria (AC) from surveillance procedure 6.HPCI.404 are provided below. Based on these criteria, the four examinations of HPCI-SOV-SSV87 from November 2006 through March of 2011 resulted in "SAT" results for all visual examinations. In each case, the plunger and stem assembly did not have to be replaced and the coil was also not replaced. AC for future examinations for SSV64 and SSV87 will not change.

*[AC] Visually examine disassembled solenoid valve parts as follows, recording any discrepancies found:*

*Valve body for damage, erosion, corrosion, and cleanliness.*

*[ ] SAT; [ ] UNSAT*

*Insert for damage, erosion, or wear.*

*[ ] SAT; [ ] UNSAT*

*Piston for damage, erosion, corrosion, wear, or scoring. Replace if any of the above is evident.*

*[ ] SAT; [ ] UNSAT*

*Plunger and stem assembly for erosion, corrosion, and freedom of movement.*

*[ ] SAT; [ ] UNSAT*

*If plunger and stem assembly is found defective, replace with a new assembly.*

*Ensure stem spring returns piston rod link to full extended position when depressed and released.*

*[ ] SAT; [ ] UNSAT*

Completed By: \_\_\_\_\_

*[AC] An Electrician or qualified Valve Team Technician shall check continuity and physical condition of the coil, recording any discrepancies found. Record continuity check results as SAT or UNSAT.*

*[ ] SAT; [ ] UNSAT*

*Completed By: \_\_\_\_\_*

*[AC] If coil is replaced, check resistance of replacement coil, recording any discrepancies found. The resistance check is to compare the original coil to the replacement coil to ensure it is the correct replacement.*

*[ ] SAT; [ ] UNSAT*

*Completed By: \_\_\_\_\_*

NRC Question #4

*If the disassembly and examination interval is extended to 36 months and issues/problems are discovered in HPCI-SOV-SSV64 or HPCI-SOV-SSV87, please state any planned disassembly and examination interval change. If the disassembly and examination interval is decreased, please provide the criteria used to return to a 36-month interval.*

Response

If an issue is discovered with HPCI-SOV-SSV64 or HPCI-SOV-SSV87 (failure of AC) during the 36-month examination, the affected valve will be repaired or replaced and returned to a nominal 18-month frequency. If the valve has an acceptable examination after 18 months, the valve may be returned to a 36-month frequency. The basis for any frequency change will be documented. This is consistent with the Condition Monitoring Appendix II section of the American Society of Mechanical Engineers Operating and Maintenance Code for check valves.