

Mr. G. R. Horn
Sr. Vice President of Energy Supply
Nebraska Public Power District
1414 15th Street
Columbus, NE 68601

October 28, 1998

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING
GENERIC LETTER 96-05 PROGRAM AT COOPER NUCLEAR
STATION (TAC NO. M97035)

Dear Mr. Horn:

On September 18, 1996, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves," to request that nuclear power plant licensees establish a program, or ensure the effectiveness of the current program, to verify on a periodic basis that safety-related motor-operated valves (MOVs) continue to be capable of performing their safety functions within the current licensing basis of the facility.

On May 4, 1998, the Nebraska Public Power District submitted an updated Cooper Nuclear Power Station response to GL 96-05 indicating the intent to implement the provisions of a Joint Owners Group (JOG) Program on MOV Periodic Verification. The NRC has encouraged licensees to participate in the industry-wide JOG program to provide a benefit in reactor safety by sharing expertise and information on MOV performance and to increase the efficiency of GL 96-05 activities at nuclear plants. Licensee participation in the JOG program also minimizes the amount of information necessary for the NRC to review each licensee's response to GL 96-05. As a result, we require only limited information to complete our GL 96-05 review for Cooper.

Enclosed is a request for additional information regarding the GL 96-05 program at Cooper. This request and the response date have been discussed with you staff. It is requested that the NPPD response be provided within 90 days of the receipt of this letter. If you have any questions on this matter, please call David Wigginton at (301) 415-1301.

Sincerely,
ORIGINAL SIGNED BY:
David L. Wigginton, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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Docket No. 50-298

Enclosure: As stated
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script, appearing to read "D. Wigginton".

David L. Wigginton, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-298

Enclosure: As stated

cc w/encl: See next page

REQUEST FOR ADDITIONAL INFORMATION ON RESPONSE OF
COOPER NUCLEAR STATION TO GENERIC LETTER 96-05

1. In a letter dated November 5, 1996, the Nuclear Regulatory Commission (NRC) concluded that the Nebraska Public Power District (NPPD) had satisfactorily addressed its commitments to implement a motor-operated valve (MOV) program in response to Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance." Therefore, the NRC closed its review of the GL 89-10 program at Cooper based on a letter dated August 6, 1996, from the licensee and the results of an inspection of the licensee's MOV program documented in NRC Inspection Report (IR) 50-298/96-10 (dated July 10, 1996). In the November 5, 1996 letter, the NRC indicated that NPPD planned to maintain the existing available valve factors for MOVs in Valve Groups 2, 3 and 8 until further followup review. In IR 96-10, the NRC identified several additional long-term aspects of the NPPD's MOV program. For example, the NRC noted that (1) the licensee needed to formalize program documentation; (2) the licensee had used test data from the Electric Power Research Institute (EPRI) MOV Performance Prediction Program in determining valve factors for Valve Groups 3 and 8 although the EPRI testing program was not intended to establish a statistical database for assigning bounding valve factors; (3) limited data had been available to justify the licensee's assumption for stem lubricant degradation; (4) the licensee would be expected to address new industry information on blowdown performance of gate valves for applicability within its program; and (5) the past operability status of specific core spray valves was in question with respect to pressure locking concerns. In the letter dated November 5, 1996, the NRC also stated that the licensee would be expected to respond to new information on MOV performance, such as the issues described in NRC Information Notice 96-48, "Motor-Operated Valve Performance Issues." In a letter dated March 17, 1997, NPPD provided updated information on its plans to maintain the available valve factors for MOVs in Groups 2, 3 and 8 as part of its response to GL 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves." However, NPPD did not indicate its plans to provide further justification for its assumed valve factors for these Valve Groups, particularly in light of the completion of the NRC review of the EPRI MOV Performance Prediction Program. In a letter dated May 7, 1997, NPPD notified the NRC that a previously planned modification to the steam supply outboard isolation valve in the Reactor Core Isolation Cooling (RCIC) system was not necessary because of additional capability margin obtained through a re-evaluation of the electrical supply to this MOV. However, NPPD did not indicate consideration of the findings from the EPRI MOV program regarding potential unpredictable behavior of MOVs under blowdown conditions. NPPD should discuss its actions to address the above long-term aspects of its MOV program at Cooper.
2. In GL 96-05, the NRC discussed the scope of the program with respect to safety-related MOVs that are assumed to be capable of returning to their safety position when placed in a position that prevents their safety system (or train) from performing its safety function; and the system (or train) is not declared inoperable when the MOVs are in their nonsafety position. In IR 96-10, the NRC discussed the omission from the licensee's

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GL 89-10 program of several MOVs that are stroked to their non-safety position for surveillance or test activities although the licensee considers the system or train to continue to be operable. In a letter dated March 17, 1997, NPPD indicated that such MOVs are not included in the GL 96-05 program at Cooper but that these MOVs will continue to be maintained with sufficient analytical capability to return to their standby system lineup position. In a safety evaluation dated June 25, 1996, to the licensee of the Duane Arnold Nuclear Center, the NRC concluded, in response to that licensee's removal of 17 MOVs from its GL 89-10 program that have safety-related functions but are normally in their safety position, that those MOVs are subject to the requirement that they be capable of returning to their safety position (if they are out of their safety position for surveillance or testing) or the provisions of the appropriate Technical Specifications (TSs) for the systems (or trains) out of service must be followed. The NRC also noted that the Duane Arnold licensee needed to address any applicable containment isolation or pipe break isolation requirements for these MOVs. In the safety evaluation, the NRC concluded that commitments made by the Duane Arnold licensee provided adequate confidence that those 17 MOVs would maintain capability to return to their safety position under accident conditions. The NRC also noted that the Duane Arnold licensee would be expected to take appropriate action according to its TSs if plant or industry information revealed that those MOVs were not capable of returning to their safety position. Finally, the NRC stated that the Duane Arnold licensee would be expected to periodically evaluate the capability of those MOVs to return to their safety position as part of its long-term MOV program. With respect to such MOVs placed in their non-safety position at Cooper, NPPD should address its plans for maintaining torque switch settings, and the feedback of industry operating experience and data. Further, NPPD should discuss the manner in which its approach will provide confidence that these MOVs will be capable of returning to their safety position, including (1) plans for performing required switch setting adjustments promptly, (2) any specified MOV operation under dynamic conditions, or (3) any future diagnostic testing. NPPD should describe the bases for its confidence that (1) these MOVs will continue to be capable of returning to their safety position, (2) any degradation in MOV performance will be identified prior to causing the MOVs to be incapable of returning to their safety position, and (3) any action necessary to ensure MOV capability will be taken in a timely manner.

3. In its letters dated March 17, 1997, and May 4, 1998, NPPD states that it is participating in the Joint Owners Group (JOG) Program on MOV Periodic Verification. Please indicate if you are applying the BWROG methodology for ranking MOVs according to their safety significance as described in BWROG Topical Report NEDC 32264 and the NRC safety evaluation dated February 27, 1996. If not, you should describe the methodology used for risk ranking MOVs at Cooper in detail.
4. The JOG program focuses on the potential age-related increase in the thrust or torque required to operate valves under their design-basis conditions. In the NRC safety evaluation dated October 30, 1997, on the JOG program, the NRC specified that licensees are responsible for addressing the thrust or torque delivered by the MOV motor actuator and its potential degradation. NPPD should describe the plan at Cooper for ensuring adequate MOV motor actuator output capability, including consideration of recent guidance in Limitorque Technical Update 98-01 and its Supplement 1.

Mr. G. R. Horn
Nebraska Public Power District

Cooper Nuclear Station

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