

December 19, 1990  
LIC-90-0982

Omaha Public Power District  
444 South 16th Street Mall  
Omaha, Nebraska 68102 2247  
402/636-2000

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, DC 20555

- References:
1. Docket No. 50-285
  2. Letter from NRC (J. G. Partlow) dated June 25, 1990 (Generic Letter 90-06)
  3. Letter from OPPD (W. G. Gates) to NRC (Document Control Desk) dated October 8, 1990 (LIC-90-0756)

Gentlemen:

SUBJECT: Response to Generic Letter 90-06, "Power-Operated Relief Valve and Block Valve Reliability; Additional Low-Temperature Overpressure Protection for Light-Water Reactors"

This letter transmits Omaha Public Power District's (OPPD's) response (Attachment 1) to Generic Letter 90-06 and a schedule (Attachment 2) for implementing these actions at Fort Calhoun Station (FCS).

Presently, the Power-Operated Relief Valves (PORVs) and block valves are designated as Critical Quality Equipment (CQE) (Safety-Related) equipment. Both the PORVs and their associated block valves are on the FCS CQE List and are tested in the Inservice Test Program (Reference 3).

This letter is being submitted under oath pursuant to the requirements of GL 90-06.

If you should have any questions, please contact me.

Sincerely,

*W. G. Gates*

W. G. Gates  
Division Manager  
Nuclear Operations

WGG/sel

Attachments

c: LeBoeuf, Lamb, Leiby & MacRae  
R. D. Martin, NRC Regional Administrator, Region IV  
W. C. Walker, NRC Project Manager  
R. P. Mullikin, NRC Senior Resident Inspector

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of  
Omaha Public Power District  
(Fort Calhoun Station  
Unit No. 1)

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Docket No. 50-285

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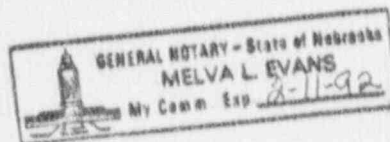
W. G. Gates, being duly sworn, hereby deposes and says that he is the Division Manager - Nuclear Operations of the Omaha Public Power District; that as such he is duly authorized to sign and file with the Nuclear Regulatory Commission the attached information concerning Omaha Public Power District's response to Generic Letter 90-06; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information, and belief.

W. G. Gates  
W. G. Gates  
Division Manager  
Nuclear Operations

STATE OF NEBRASKA)  
) ss  
COUNTY OF DOUGLAS)

Subscribed and sworn to before me, a Notary Public in and for the State of Nebraska on this 19th day of December, 1990.

Melva L. Evans  
Notary Public



## ATTACHMENT 1

### GL 90-06 RECOMMENDATIONS AND OPPD'S RESPONSE

#### NRC Recommendation

1. Include PORVs and block valves within the scope of an operational quality assurance program that is in compliance with 10 CFR Part 50, Appendix B. This program should include the following elements:
  - a. The addition of PORVs and block valves to the plant operational Quality Assurance List.
  - b. Implementation of a maintenance/refurbishment program for PORVs and block valves that is based on the manufacturer's recommendations or guidelines and is implemented by trained plant maintenance personnel.
  - c. When replacement parts and spares, as well as complete components, are required for existing non-safety grade PORVs and block valves (and associated control systems) it is the intent of this generic letter that these items may be procured in accordance with the original construction codes and standards.

#### OPPD Response

1. The Fort Calhoun Station (FCS) PORVs and their associated block valves are currently included in an operational Quality Assurance (QA) Program that is in compliance with 10 CFR Part 50, Appendix B.
  - a. The PORVs and associated block valves are designated as Critical Quality Equipment (CQE) per the FCS CQE List and Computerized History and Maintenance Planning System (CHAMPS) Equipment Database. This designation ensures that they have been installed, are tested and repaired or replaced under requirements specified in USAS B31.7, ASME Section III and ASME Section XI. The PORVs and their associated block valves are listed on the FCS CQE List and as such are tested and maintained in accordance with the quality assurance requirements as set forth in 10 CFR Part 50, Appendix B.
  - b. The PORVs and their associated block valves have been evaluated using the guidelines as stated by the FCS Preventive Maintenance (PM) Program and the appropriate tasks are scheduled/performed in accordance with this program. The PM Program task basis and content is controlled by the Special Services Engineering Department. The PM Program is implemented by the FCS Maintenance Department by personnel trained and qualified under FCS Standing Orders and Administrative Procedures. The PM Program evaluation includes the manufacturer's recommendations which have been evaluated by Special Services Engineering personnel for applicability.

- c. Replacement parts, including spares as well as complete components, are procured in accordance with the original construction codes and standards as required. Parts/components are repaired/replaced and retested using ASME Section XI repair and replacement criteria or Equipment Qualification guidelines as applicable. CQE parts and components are inspected by FCS Quality Control personnel upon receipt and are controlled using CQE receipt and storage requirements.

#### NRC Recommendation

2. Include PORVs, valves in PORV control air systems and block valves within the scope of a program covered by Subsection IWV "Inservice Testing of Valves in Nuclear Power Plants," of Section XI of the ASME Boiler and Pressure Vessel Code. Stroke testing of PORVs should only be performed during Mode 3 (Hot Standby) or Mode 4 (Hot Shutdown) and in all cases prior to establishing conditions where the PORVs are used for low-temperature overpressure protection. Stroke testing of the PORVs should not be performed during power operation. Additionally, the PORV block valves should be included in the licenses' expanded MOV test program discussed in NRC Generic Letter 89-10, "Safety-Related Motor Operated Valve Testing and Surveillance" dated June 28, 1989.

#### OPPD Response

2. The block valves are stroke tested quarterly in the closed direction under the Inservice Test Program. In addition to the Inservice Testing of the block valves in accordance with ASME Section XI requirements, the block valves are also included in the expanded MOV Test Program (GL 89-10).

The PORVs are stroke tested in both the open and closed direction prior to entering Cold Shutdown in accordance with the guidelines set forth in the FCS Inservice Inspection (ISI) Program Plan, Revision 5 for the 2nd Ten Year Interval. The PORVs are tested at a pressurizer pressure between 350-450 psia and a Reactor Coolant System (RCS) temperature of between 300-350°F. Testing the PORVs at this temperature and pressure with a steam bubble in the pressurizer ensures that steam is released to the Quench Tank when the PORVs are stroked open. This allows for a more controllable test and ensures that the position indicators are reading accurately. This test pressure is higher than that listed in the ISI Program Plan, Revision 5 and was increased to eliminate a concern raised by FCS Operations about the possibility of RCS subcooling which could cause a loss of net positive suction head to the Reactor Coolant Pumps. OPPD's official copy of the ISI Program Plan has been revised to reflect this change.

The PORVs are 2 1/2" Dresser valves with a soft seat and are designed to open on a differential pressure. The low pressure testing of the PORVs conservatively tests the operability of the valves. To test the PORVs at a higher pressure could result in damage to the soft seat, should a leak develop. In addition, the conditions under which a low-temperature overpressure transient is most likely to occur is when the reactor coolant temperature is less than or equal to 200°F. Low-temperature overpressure protection (LTOP) transients that have challenged the overpressure protection systems at other nuclear facilities have occurred with the RCS temperatures in the range of 80°F to 190°F. Under the current FCS ISI Program Plan, the PORVs are tested at 300-350°F, significantly above this temperature.

OPPD is confident that periodic testing of the PORVs at this pressure/temperature, along with the administrative controls (e.g., Operating Instructions, Operating Procedures), is adequate to ensure the operability of the PORVs when needed to prevent damage to the RCS due to potential overpressurization at low temperatures.

### NRC Recommendations

3. For operating PWR plants, modify the limiting conditions of operation of PORVs and block valves in the Technical Specifications for Modes 1, 2, and 3 to incorporate the position adopted by the staff in recent licensing actions. Attachments A-1 through A-3 are provided for guidance. The staff recognizes that some recently licensed PWR plants already have technical specifications in accordance with the staff position. Such plants are already in compliance with this position and need merely state that in their response. These recent technical specifications require that plants that run with the block valves closed (e.g. due to leaking PORVs) maintain electrical power to the block valves so they can be readily opened from the control room upon demand. Additionally, plant operation in Modes 1, 2, and 3 with PORVs and block valves inoperable for reasons other than seat leakage is not permitted for periods of more than 72 hours.

### OPPD Response

3. OPPD will prepare a Facility License Change (FLC) to be submitted to the NRC concerning the operability/setting of the PORVs and the actions required to be taken in the event of failure. This FLC will incorporate, at a minimum, the recommendations provided in Attachment A-1 of GL 90-06. Using the guidance provided by Attachments A-1 and A-3, the intent of the Generic Letter 90-06 will be met.

This FLC will also incorporate, at a minimum, the Safety Injection/Charging Pumps enable/disable requirements and venting requirements as stated in Attachments B-1 and B-3 of GL 90-06. Using the guidance provided by Attachments B-1 and B-3, the intent of the Generic Letter 90-06 will be met.

The FLC noted above, which will meet the intent of Generic Letter 90-06, is expected to be submitted to the NRC by the end of the 1991 Refueling Outage.

ATTACHMENT 2

STATUS AND SCHEDULE FOR IMPLEMENTATION  
OF APPLICABLE GL 90-06 RECOMMENDATIONS

<u>NRC RECOMMENDATION</u>	<u>IMPLEMENTATION DATE</u>
1a. Add PORVs/Block Valves to CQE List	Complete
1b. Add PORVs/Block Valves to PM Program	Complete
1c. Procure Spare Parts/Replacement Parts in Accordance with Original Standards	Complete
2. Include PORVs/Block Valves in ISI/MOV Programs	Complete
3a. Modify Limiting Conditions of Operation as Required (Attachments A-1 and A-3 of GL 90-06)	Submit FLC by end of 1991 Refueling Outage.
3b. Modify Limiting Conditions of Operation in Cold Shutdown as Required (Attachments B-1 and B-3 of GL 90-06)	Submit FLC by end of 1991 Refueling Outage.