

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Bart D. Withers
President and
Chief Executive Officer

May 24, 1988

WM 88-0146

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

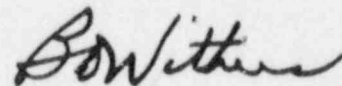
Subject: Docket No. 50-482: Response to Generic Letter 88-03

Gentlemen:

The purpose of this letter is to transmit a response to Generic Letter 88-03, "Resolution of Generic Safety Issue 93, Steam Binding of Auxiliary Feedwater Pumps" pursuant to 10 CFR 50.54(f). The generic letter was issued to (1) inform licensee's of the Staff's resolution of generic safety issue 93, and (2) request licensee's to continue to implement, as a minimum, the monitoring and corrective procedures previously identified for interim resolution of this issue in IE Bulletin 85-01, "Steam Binding of Auxiliary Feedwater Pumps".

If you have any questions concerning this matter, please contact me or Mr. O. L. Maynard of my staff.

Very truly yours,



Bart D. Withers
President and
Chief Executive Officer

BDW/jad

Attachment

cc: B. L. Bartlett (NRC), w/a
D. D. Chamberlain (NRC)
R. D. Martin (NRC), w/a
P. W. O'Connor (NRC), w/a (2)

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STATE OF KANSAS)
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COUNTY OF COFFEY)

Bart D. Withers, of lawful age, being first duly sworn upon oath says that he is President and Chief Executive Officer of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the content thereof; that he has executed that same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By *B. Withers*
Bart D. Withers
President and Chief Executive Officer

SUBSCRIBED and sworn to before me this 24 day of May, 1988.

Marlene Beachman
Notary Public

Expiration Date *August 4, 1990*



RESPONSE TO GENERIC LETTER 88-03

Generic Letter 88-03, "Resolution of Generic Safety Issue 93, Steam Binding of Auxiliary Feedwater Pumps", was issued on February 17, 1988. This generic letter was issued to:

- (1) inform licensee's of the NRC's resolution of Generic Safety Issue 93, and
- (2) request that licensee's continue to implement, as a minimum, the monitoring and corrective procedures previously identified for interim resolution of this issue in IE Bulletin 85-01, "Steam Binding of Auxiliary Feedwater Pumps".

To reduce the probability of AFW pump failure as a consequence of steam binding if backleakage does occur, IE Bulletin 85-01 requested that certain licensee's and construction permit holders implement procedures both for monitoring the AFW piping temperatures for indication of possible backleakage and for restoring the pumps to operable status if steam binding were to occur. IE Bulletin 85-01 recommended that procedural controls remain in effect until (1) the completion of hardware modifications to substantially reduce the likelihood of steam binding, or (2) it was superseded by action implemented as a result of resolution of Generic Issue 93. Generic Letter 85-05 resolves Generic Issue 93 by perpetuating the recommendations of IE Bulletin 85-01. In particular, the generic letter stated that all addresses should:

- (1) Maintain procedures to monitor fluid conditions within the AFW system each shift during times when the system is required to be operable. This monitoring should ensure that fluid temperature at the AFW pump discharge is maintained at about ambient levels.
- (2) Maintain procedures for recognizing steam binding and for restoring the AFW system to operable status, should steam binding occur.

On February 11, 1986, the response to Bulletin 85-01 was submitted for Wolf Creek Generating Station (WCGS). This response identified procedures which are being used to monitor fluid conditions within the Auxiliary Feedwater (AFW) System. In addition, procedures are in place to recognize steam binding and restore the AFW pumps to an operable status.

At WCGS, temperature elements are provided at the top of the feedwater lines between the pump discharge check valves and pump discharge flanges which indicate the temperature on the Balance of Plant computer. Procedure STS CR-001, Revision 3, requires temperature readings be taken once per shift to monitor fluid conditions while in modes 1, 2, and 3.

Procedures were also developed for recognizing steam binding and for restoring the AFW system to operable status should steam binding occur. Procedure STS CR-001 recognizes the possibility of steam binding by monitoring fluid temperature. If the temperature approaches 200° F procedure OFN 00-026, Revision 0, is implemented. OFN 00-026 was developed to provide actions to be followed upon identification of possible steam binding of any AFW pump.

In addition to the above mentioned administrative controls, the following design features at WCGS will minimize problems due to steam binding of AFW pumps:

- (1) There are three check valves in series between the main feedwater lines and the AFW pumps that are designated to prevent reverse flow to the AFW pumps.
- (2) The piping is not insulated from the AFW check valve at the main feedwater line to the pump discharge flange. The exposed line should help condense any steam formed in the pipe.
- (3) The steam driven AFW pump minimum flow line tap is on the top of a line located 16" from the discharge flange. The minimum flow lines on the motor driven AFW pumps are 45 degrees from vertical and 30" from the pump discharge flanges. These locations will help vent the steam to the condensate storage tank, should back leakage occur.

The combination of design features and administrative controls mentioned above reduces the probability for steam binding of AFW pumps to an acceptable level. Should steam binding occur adequate procedures are in place to recognize the situation and restore the AFW pumps to an operable status. These procedures have been in place since 1985 and will be maintained at WCGS.