

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Forrest T. Rhodes
Vice President
Engineering & Technical Services

March 19, 1990

ET 90-0048

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Subject: Docket No. 50-482: Response to Generic Letter 89-19,
Request for Action Related to Resolution of Unresolved
Safety Issue A-47 "Safety Implication of Control Systems
in LWR Nuclear Power Plants"

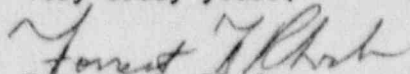
Gentlemen:

The purpose of this letter is to provide Wolf Creek Nuclear Operating Corporation's (WCNOC) response to Generic Letter 89-19, Request for Action Related to Resolution of Unresolved Safety Issue A-47 "Safety Implication of Control Systems in LWR Nuclear Power Plants". The Generic Letter requests a statement as to whether the recommendations in Enclosure 2 to the Generic Letter have been implemented concerning automatic steam generator overfill protection.

The attachment provides a description of the steam generator overfill protection system and the plant procedures and technical specifications that verify operability. The design of the steam generator overfill protection system at Wolf Creek Generating Station (WCGS) satisfy the objectives of item (2)(a) of Generic Letter 89-19, Enclosure 2. WCGS plant procedures and technical specifications include provisions to periodically verify the operability of the overfill protection and to assure that automatic overfill protection is available to mitigate main feedwater overfeed events during reactor power operation.

If you have any questions concerning this matter, please contact me or Mr. H. K. Chernoff of my staff.

Very truly yours,



Forrest T. Rhodes
Vice President
Engineering & Technical Services

9003260245 900319
PLR ADCK 03000482
F PDC

FTR/aem

Attachment

cc: R. D. Martin (NRC), w/a
D. Persinko (NRC), w/a
D. V. Pickett (NRC), w/a
M. E. Skow (NRC), w/a

P.O. Box 411 / Burlington, KS 66839 / Phone. (316) 364-8831

An Equal Opportunity Employer M/F/H/VET

A001
1/1

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Forrest T. Rhodes, of lawful age, being first duly sworn upon oath says that he is Vice President Engineering and Technical Services 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 Forrest T. Rhodes
Forrest T. Rhodes
Vice President
Engineering & Technical Services

SUBSCRIBED and sworn to before me this 14 day of March, 1990.

Marlene Beachner
Notary Public

Expiration Date August 4, 1990



Response to Generic Letter 89-10

Item (2)(a):

It is recommended that all Westinghouse plant designs provide automatic steam generator overflow protection to mitigate MFW overfeed events. The design for the overflow protection system should be sufficiently separate from the MFW control system to ensure that the MFW pump will trip on a reactor high-water-level signal when required, even if a loss of power, a loss of ventilation, or a fire in the control portion of the MFW control system should occur. Common-mode failures that could disable overflow protection the the feedwater control system, but would still result in the feedwater pump trip, are considered acceptable failure modes.

Response:

NRC Staff review of the steam generator level control and protection is documented in Section 7.3.2.8 of NUREG-0830, "Safety Evaluation Report related to the operation of Callaway Plant" dated October 1981 and NUREG-0881, "Safety Evaluation Report related to the operation of Wolf Creek Generating Station" dated April 198?. As a result of the staff review a modification was made to the Engineered Safety Features Actuation System logic design such that a two-out-of-four high steam generator level signal will isolate main feedwater flow by closing the Main Feedwater Isolation Valves and by tripping the Main Feedwater Pumps. Installation of the modification was verified by a representative of the Office of Nuclear Reactor Regulation and documented in NRC Inspection Report 50-482/84-46.

The control portion of the steam generator level control system is completely separated, both physically and electrically, from the steam generator overflow protection system. The steam generator level control system inputs from the level transmitters are isolated from the safety-related portion of the system that generates the steam generator overflow protection signals. The power source which supplies the level control equipment is different than the power source which supplies the overflow protection system. In addition, the cabinets which house the level control equipment are physically separated from the cabinets which house the overall protection system. Therefore, a fire in the level control cabinet will not cause a failure of the overflow protection system to perform its intended function.

Item (2)(b):

It is recommended that plant procedures and technical specifications for all Westinghouse plants include provisions to periodically verify the operability of the MFW overfill protection and ensure that the automatic overfill protection is operable during reactor power operation. The instrumentation should be demonstrated to be operable by the performance of a channel check, channel functional testing, and channel calibration, including setpoint verification. The technical specifications should include appropriate LCOs. These technical specifications should be commensurate with existing plant technical specification requirements for channels that initiate protective actions. Plants that have previously approved technical specifications for surveillance intervals for overfill protection are considered acceptable.

Response:

Wolf Creek Generating Station (WCGS) Technical Specification 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation" include requirements to periodically verify the operability of the overfill protection system. Table 4.3-2 identifies the specific surveillance surveillance requirements. A channel check is performed during each shift per STS CR-001, "Shift Logs for Modes 1, 2, & 3". A Analog Channel Operation Test (ACOT) is performed monthly per STS IC-201, 202, 203 and 204, "ACOT 7300 Process Instrumentation Protection Set". A channel calibration is performed every refueling outage per STS IC-505A and B, "Channel Calibration of Steam Generator Narrow Range Level".