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John L. Skolds
Vice President
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JAN 02 1991

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Mr. S. D. Ebnetter
Regional Administrator
U. S. Nuclear Regulatory Commission
Region II, Suite 2900
101 Marietta Street, NW
Atlanta, GA 30323

Dear Mr. Ebnetter:

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION
DOCKET NO. 50/395
OPERATING LICENSE NO. NPF-12
SPECIAL REPORT (SPR 90-016) (ONO 900119)

On December 3, 1990, during performance of Surveillance Test Procedure (STP) 128.007, "CO₂ Valve Lineup Verification," the Fire Protection Officer (FPO) questioned the position of the CO₂ tank outlet valve (XVG-14072). This system provides fire suppression to the Relay Room.

The operator for this valve consists of a handwheel which turns a worm gear mated to a sector gear which, in turn, drives the butterfly valve. Slack in this gear assembly was such that the handwheel could be turned approximately four turns before resistance was encountered. When the handwheel was operated to the point that resistance was encountered, it was believed that the valve was open. This sequence of events occurred following maintenance and return of the system to an operable status on October 31, 1990. The alignment was second checked on that date and again on November 6, 1990. On each occasion, the valve was verified to be full opened when resistance was encountered. The valve had a locking device which provided indication of the handwheel travel and also provided a method for securing the valve in the open position. This locking device had been broken several years ago and therefore was not available as a means of determining valve position.

On December 3, 1990, during a monthly inspection, the FPO questioned the valve position because of the relationship of the worm gear and the sector gear. The FPO believed that the worm gear would be at the end of its travel when the valve was full open. After relating this concern to the Shift Supervisor, permission was given to remove the locking chain (used to replace broken locking device) and operate the valve in order to verify the valve position. At the point in the valve operation when resistance was encountered, additional pressure was applied. A slight "pop" was heard and the gear assembly operated freely. Once the valve operator was free of any binding, the initial problem could not be repeated. It should be noted that valve travel from full close to full open is approximately eight to nine turns.

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The cause of the event is attributed to a failure to adequately restore the system to operable status. This failure was caused by a personnel error in the danger tagging restoration sequence. The CO₂ outlet bypass valve (XVT-14073) was not utilized to equalize the pressure across XVG-14072 prior to opening.

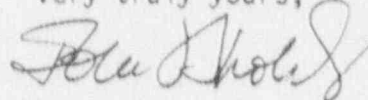
In addition, determining the correct valve position was hindered by a broken valve position indicator and the uniqueness of the valve (only valve of this type in the plant).

The safety significance of this event is minimal due to the fact that the CO₂ system was not needed during the time period when XVG-14072 was closed. In addition, other fire protection activities and equipment would have indicated the need for fire suppression actuation.

To preclude recurrence, the licensee is taking the following actions: (A) a Maintenance Work Request has been submitted to investigate the elimination of "slack" in the valve, (B) a placard is being placed at the valve assembly noting the need to use the bypass valve to equalize and the number of turns required to fully open the outlet valve, (C) a Maintenance Work Request has been written to replace the locking device on the valve, and (D) a copy of this report will be placed in the Operator's Required Reading.

Items B and D above will be completed by January 31, 1991, and actual repairs to the valve will be accomplished after parts have been obtained and when plant conditions will allow.

Very truly yours,



John L. Skolds

RJB:JLS:lcd

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