

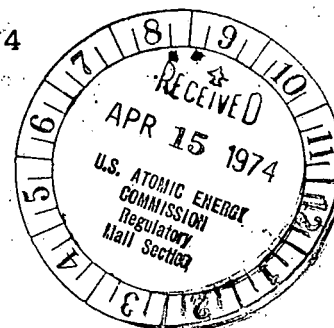
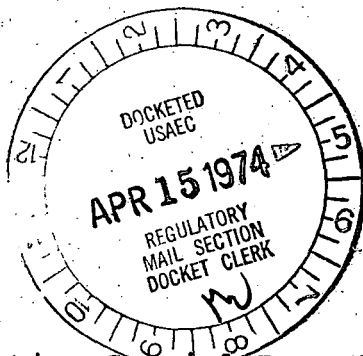


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**Regulatory Docket File**

April 10, 1974

Mr. D. J. Skovholt  
 Assistant Director  
 for Operating Reactors  
 Directorate of Licensing  
 Office of Regulation  
 U.S. Atomic Energy Commission  
 Washington, D. C. 20545



Subject: Dresden Station Special Report No. 18, Supplement C  
Units 2 and 3 - AEC Dkts 50-237 and 50-249  
 Applicable to Quad-Cities Units 1 & 2  
 AEC Dkts 50-254 & 50-265

Dear Mr. Skovholt:

In response to your letter dated October 18, 1973, this supplement to the report of Safety Valve Investigations is submitted. As indicated in a letter to Mr. D. L. Ziemann dated January 31, 1974, the final safety valve corrective measures were selected with consideration of the measures for the revised reactor scram reactivity curve.

The major criteria to be fulfilled by the final corrective measures were:

1. Eliminate or significantly reduce the likelihood of containment pressurizations resulting from premature actuation of the safety valves.
2. On the basis of analyses performed using the present design bases scram reactivity curve ("generic D curve"), allow operation of the reactor at full power with "all rods out" and within FSAR criteria.

The planned final corrective measures fulfill both criteria completely. The plan is to replace the existing five (5) electromatic relief valves and eight (8) safety valves with nine (9) combination safety/relief valves. The discharges of all nine (9) combination safety/relief valves will be piped into the containment suppression pool. Five (5) of the combination valves will be installed in place of the existing electromatic relief valves and will discharge to the suppression pool through existing piping. The remaining four (4) valves will be installed in place of safety valves and with new

discharge piping.

These measures will meet the first criteria by eliminating the safety valves which discharge steam directly to the containment. Although measures to reduce the likelihood of premature operation of the existing safety valves were identified, routing the discharge of all safety and relief valves to the suppression pool positively eliminates the concern. It was concluded that improving the performance of the existing safety valves was a valid alternate, and many of the significant corrective measures associated with this alternate have been implemented as interim measures, i.e. removal of insulation, correct spring material.

Installation of combination safety and relief valves with discharges piped to the torus was selected primarily to facilitate the corrective measures associated with the new scram reactivity curve. The major effect of the new scram reactivity curve on transient analyses was to increase the peak pressure for transients involving operation of the electromatic relief valves. The electromatic relief valves were initially sized to maintain the peak pressure at least 25 psi below the lowest safety valve setpoint. With the new scram reactivity curve the analyses indicated the 25 psi margin could not be met for the existing plant design. Interim measures for handling the new scram reactivity curve have been described in Dresden Special Report No. 29 and supplements. The planned corrective measures facilitate resolution of the new scram reactivity curve primary concern by providing additional relief valve capacity and by eliminating the need for the 25 psi margin between relief valve transients and the safety valves. These improvements, in combination with a "Prompt Relief (valve) Trip" system, encompass the planned final corrective measures associated with the new scram reactivity curve.

The corrective measures described in this report, are planned for Dresden Units 2 & 3 and Quad-Cities Units 1 & 2. Presently it is scheduled to complete the modifications during the 1975 refueling outages pending delivery of 36 combination safety/relief valves. A detailed report describing these proposed modifications will be submitted for your review and approval by January 1, 1975.

One (1) signed original and thirty-nine copies of the supplement are submitted for your information.

Very truly yours,



J. S. Abel

Nuclear Licensing Administrator  
Boiling Water Reactors