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June 29, 1979

1-069-21

Director of Nuclear Reactor Regulation
ATTN: Mr. R. W. Reid, Chief
Operating Reactor Branch #4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Re-Evaluation of ECCS Performance
(File: 0930, 1510)

Gentlemen:

Pursuant to the request in your letter dated March 20, 1979, the following information is provided in support of your review of the Arkansas Nuclear One - Unit 1 (ANO-1) electrical and instrumentation subsystems of the emergency core cooling system for single failure.

The Rotork submersible valve operators for valves CV-1050, CV-1410, CV-1414, and CV-1415 were designed to remain functional in a submerged condition for 30 days with a maximum fluid temperature of 271°F decaying to 130°F in 30 days, and at a maximum pressure of 53 psig decaying to 5 psig in 30 days. Qualification tests for this type operator were done at a maximum pressure of 70 psig and a maximum temperature 370°F. Therefore these valves can be depended upon to operate for at least 30 days under post-LOCA accident conditions.

CV-3824 (Service Water System discharge valve to the discharge flume) is normally open. CV-3824 is a large 18" butterfly valve easily distinguished (i.e., largest of three (3) valves located together) and located in a remote location within a controlled access area. During normal operation, power to the circuit breaker for this valve's motor is removed and the circuit breaker is tagged. Before either of these conditions can be changed, authorization of the shift supervisor in accordance with administrative procedures must be obtained and the valve realignment must be verified. We note a substantial physical effort would be required to manually close this large butterfly valve against the flow of the Service Water System.

Assuming CV-3824 was closed during normal operation, two (2) means of detecting this occurrence are available to the control room operators. While power to the circuit breaker for CV-3824's motor is removed, position indication for the valve is still available in the control

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room. Also, with the service water discharge flow path blocked during normal operation (i.e., CV-3824 was closed), the discharge pressure of the service water pumps would create a high differential pressure across each operating pump. This condition would be alarmed in the control room. (See Section 9.3.1 of ANO-1 FSAR.) In addition to these two means of detecting unauthorized closure of CV-3824 discussed above, each train of the Service Water System provides indication in the control room of flow and high temperature conditions which would be noted almost immediately.

Based on the information discussed above, we can identify no single failure or operator error which would result in significantly adverse consequences to ECCS performance. Therefore, no amendment to our Technical Specifications for CV-3823 or CV-3824 is proposed.

Very truly yours,

David C. Trimble

David C. Trimble
Manager, Licensing

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