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Mr. R. L. Tedesco
Assistant Director for Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

SUBJECT: Waterford 3 SES
Docket No. 50-382
Reactor Systems Branch (RSB)
SER Open Item No. 81



Dear Mr. Tedesco:

Attached please find our response to SER Open Item No. 81 required by the RSB to complete their input to the SER.

If we can be of further assistance in this matter, please call.

Yours very truly,

L. V. Maurin
Assistant Vice President
Nuclear Operations

LVM/MPF/ddc

Enclosure

cc: Mr. E. L. Blake, Mr. W. M. Stevenson

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In discussion with the NRC's Reactor Systems Branch (RSB), and in RSB's draft SER Section 5.4.7, RSB has stated that Waterford -3 should modify the controls on the Safety Injection Tank (SIT) Discharge Valves in order that they be completely operable from the control room. The rationale is that Shutdown Cooling System should be capable of being completely initiated from the control room. The following discussion explains why this change cannot be made without degrading the defense in depth concept and deviating from existing NRC criteria.

The SIT discharge valves are locked open during normal operation. This is accomplished by locking open the breakers in the Motor Control Center after the motor operated valves have been placed in their open position. These breakers are locked open in order to ensure that no single failure such as an electrical fault will cause these valves to be closed when safety injection is required. Placing a padlock on the breaker also diminishes the probability of the valves being closed due to operator or maintenance error. Locking open this breaker is in fact required by ICSB 4 and 18 in order to meet single failure criteria.

During cooldown, an interlock will prevent these valves from being closed while primary pressure is above 400 psig. At 650 psig primary pressure, the operator vents the SIT's to 377 psig. At 400 psig, the operator will close the SIT's. However, an SIAS will override and reopen the valves. This ensures SIT availability during shutdown cooling without the danger of overpressurizing the SDCS.

In order to close the valves, an operator must go to E1 +21 (two flights of stairs directly below the control room at E1 +46), remove the padlock and locally close the breaker at the MCC. The valves in the control room may then be closed from a key locked switch. Although an operator must move a short distance from the control room, the areas he must pass through have been

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documented in the shielding study (FSAR Appendix 12.3A) as being continuously habitable post-LOCA.

The RSB reviewers have requested that we discuss the consequences of not being able to close these valves. As discussed above, there is no reason why this situation should arise, considering the proximity and habitability of the MCC area and its accesses from control room. These valves must be closed in order to cool down below the SIT pressure of 377 psig.

In summary, therefore, we feel that the necessity of meeting single failure criteria (as delineated in ICSB 4 and 18) to ensure that these valves are open and safety injection is available for outweighs any other consideration in this case.

Reference

ICSB 4 and 18; FSAR Section 6.3.2.9.5.