

July 12, 2002

Mr. Anthony R. Pietrangelo, Director  
Risk & Performance-Based Regulation  
Nuclear Generation  
Nuclear Energy Institute  
1776 I Street, N.W.  
Suite 400  
Washington, DC 20006-3708

Dear Mr. Pietrangelo:

This is to inform you of the disposition for traveler TSTF-412 containing proposed changes to the improved Standard Technical Specifications (iSTS), initiated by the NEI Technical Specification Task Force (TSTF). TSTF-412 will require modification.

The staff has reviewed traveler TSTF-412 which proposed adding a new Required Action with a Completion Time of 24 hours for the Condition of one motor driven auxiliary feedwater (AFW) pump inoperable concurrent with one inoperable steam supply to the turbine driven AFW pump, in NUREGs 1430, 1431, and 1432, Specification 3.7.5. Comments that may be useful for possible modification of TSTF-412 are enclosed.

Please contact me at (301) 415-1161 or email [wdb@nrc.gov](mailto:wdb@nrc.gov) if you have any questions or need further information on these dispositions.

Sincerely,

*/RA/*

William D. Beckner, Program Director  
Operating Reactor Improvements Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Enclosures: As stated

cc: J. Arbuckle, BWROG  
D. Bice, CEOG  
N. Clarkson, BWOOG  
S. Wideman, WOG  
D. Hoffman, EXCEL

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Staff Comments on TSTF-412

1. The auxiliary or emergency feedwater (AFW or EFW) system designs tend to vary from one plant to another. Some plants have two turbine-driven pumps and one motor-driven pump, but most have two motor-driven pumps and one turbine-driven pump. Some of the motor-driven pumps can feed all of the steam generators while some can not. Some of the motor-driven pumps are 100% capacity, and some are less than 100% capacity. These design elements are further complicated by the various situations that can arise, such as an inoperable steam supply valve for the turbine-driven pump coincident with an inoperable motor driven pump that is (a) associated with the same electrical division as the inoperable valve, or (b) associated with the opposite electrical division. TSTF-412 could be significantly improved by establishing a function-based TS that takes these differences in design and possible situations into consideration. An example of this approach can be found in Waterford Unit 3 Technical Specification (TS) 3.7.1.2, which was issued by Amendment No. 173 to the Waterford Unit 3 license on October 4, 2001 (ADAMS Accession No. ML012840538). The following guidance may be of particular interest in pursuing this approach:

- The first sentence of the reviewer's note for Action C of TSTF-412 satisfies the criteria for a 72 hour allowed outage time (AOT). In general, a 72 hour AOT is appropriate if a system is able to perform its safety function, excluding consideration of a postulated single active failure. If excess capability exists, (e.g., one steam supply to the turbine-driven pump inoperable), a 7-day AOT might be appropriate.
- If the EFW system is able to mitigate most events with limited vulnerability, excluding consideration of a postulated single active failure (e.g., vulnerable to a main steam line or main feedwater line break event 50% of the time), a 48 hour AOT might be appropriate for 100% capacity motor-driven pumps, whereas a 24 hour AOT might be appropriate for 50% capacity motor-driven pumps.
- If the EFW system is in a condition where it does not have sufficient capability to remove all of the reactor decay heat, action should be taken immediately to restore this capability. During this condition, LCO 3.0.3 and other LCOs requiring Mode changes should be suspended until the EFW system is capable of removing 100% of the reactor decay heat.

2. The proposed Required Action C.1, which states "Restore affected equipment to OPERABLE status," could be misconstrued to require restoring both the motor driven train and the steam supply to the turbine driven train within the specified Completion Time. It would be clearer to state this action as two options. It could be stated this way, for example: "C.1 Restore the motor driven train to OPERABLE status. OR C.2 Restore the steam supply to the turbine driven train to OPERABLE status."

Enclosure