

May 1, 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:

- References:
1. Memorandum for John Stefano, Project Manager, Project Directorate III-1, NRR, from Richard L. Emch, Jr., Section Chief Technical Specifications Branch, NRR, "Fermi-2 Technical Specifications (TAC 65990), dated December 29, 1987.
  2. Memorandum for Ted Quay, Senior Project Manger, Project Directorate III-1, NRR from Robert J. Giardina, Reactor Engineer, Technical Specifications Branch, NRR "Fermi-2 Technical Specification Interpretation," dated May 18, 1988.

This is to inform you of dispositions for travelers TSTF-403 and TSTF-404 containing proposed changes to the improved Standard Technical Specifications (iSTS), initiated by the NEI Technical Specification Task Force (TSTF). TSTF-403 will require modification; TSTF-404 was found suitable for the consolidated line item improvement process (CLIP).

The staff has reviewed traveler TSTF-403 which proposed to delete the words "following startup" and "prior to the next scheduled reactor shutdown" from the Applicability of STS 3.6.2.5, "Drywell to Suppression Chamber Differential Pressure" and STS 3.6.3.3, "Primary Containment Oxygen Concentration."

The basis for the change is that the generic terms "startup" and "shutdown" are not specifically defined in the STS and this can be interpreted in a variety of ways as stated in the TSTF justification. The staff agrees that the lower case forms of "startup" and "shutdown" are not defined in the STS. However, the staff has defined the term "startup" in two technical specification interpretations - References 1 and 2. Those interpretations defined "startup" lower case in the context used in iSTS 3.6.2.5 and 3.6.3.3 as the equivalent of "STARTUP" upper case or MODE 2. Conversely "shutdown" lower case would be the equivalent of "SHUTDOWN" upper case or MODES 3 and 4 for BWRs and MODES 4 and 5 for PWRs.

While deletion of the words "following startup" may be acceptable in these two specifications for reasons other than interpretational problems, the deletion of the words "prior to the next scheduled reactor shutdown" changes the intent of the specification. As currently written the LCO's have to be met during unscheduled shutdowns. If they cannot, then entry into the ACTION statements is required. The deletion of the words "prior to...shutdown" would not require entry into the ACTION statements. Based on the discussion provided in the TSTF, retaining the words "prior to ...shutdown" does not seem to cause undue burden to licensees, due to the number of times the actions would be entered between scheduled shutdowns. The staff concludes that the change is strictly for operational convenience rather than for safety considerations or because the specification is broken.

References 1 and 2 provide the criteria for defining the term "startup" and by extrapolation the term "shutdown" in TS. However, those references were based on the old STS. A cursory review of the improved STS shows that a strict interpretation of Reference 2 could lead to confusion and misinterpretation. For example, iSTS SR 3.8.1.3 Note 4 (All NUREGs) uses the word "shutdown" with no qualifier. A strict application of Reference 2 would say that "shutdown" here should mean reactor shutdown. However, the wording of the Note, the SRs cited in the Note and SR 3.8.1.3, all lead to the obvious conclusion that "shutdown" in this case refers to the diesel generator shutdown rather than the reactor shutdown. However this obvious interpretation may not be the case in other areas of the improved iSTS. In addition this may not just be a BWR/4 Owner's Group problem since the terms "startup" and "shutdown" can be found in other technical specifications in NUREG-1433 as well as NUREGs 1430, 1431, 1432 and 1434 (see enclosure 1) and in the associated Bases. If the NEI TSTF has concerns that there is a confusion/interpretational problem with the terms "startup" and "shutdown," then they need to propose a clarification/definition for the terms or change the STS. This completes our review of TSTF-403.

Disposition has been made on traveler TSTF-404 containing proposed changes to Standard Technical Specification NUREGs 1433 and 1434, initiated by the NEI TSTF. TSTF-404 revises Required Action A.1 of STS 3.1.8 "Scram Discharge Volume (SDV) Vent and Drain Valves" for one or more SDV vent or drain lines with one valve inoperable to allow for isolation of the associated line rather than restore the valve to OPERABLE status. The Note to Required Action B.1 of STS 3.1.8 which allows an isolated line to be unisolated for the purpose of draining and venting the SDV now applies to Conditions A and B and is moved to an ACTIONS Note. The Bases are revised accordingly.

Mr. Anthony Pietrangelo

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TSTF-404 will be processed through the CLIIP as requested by the TSTF. The Draft Safety Evaluation is enclosed with this letter for your information, and may be modified through public comments. Formal approval of TSTF-404 for adoption by licensees is subject to completion of the CLIIP public comments process.

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 (2)

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

Specifications that Contain the Terms  
"Startup" and "Shutdown"

NUREG-1430 B&W  
SR 3.3.2.1  
SR 3.8.1.3

NUREG-1431 WOG  
3.4.1 APPLICABILITY  
SR 3.4.19.2  
SR 3.6.19.3  
SR 3.8.1.3

NUREG-1433 BWR/4  
SR 3.1.2.1  
SR 3.1.4.1  
SR 3.5.1.6  
3.6.2.5 APPLICABILITY  
3.6.3.3 APPLICABILITY  
SR 3.8.1.3

NUREG-1432 CEOG  
SR 3.3.1.6 (ANALOG)  
SR 3.3.1.7 (ANALOG)  
SR 3.3.3.2 (ANALOG)  
SR 3.3.4.3 (ANALOG)  
SR 3.3.1.13 (DIGITAL)  
SR 3.3.2.3 (DIGITAL)  
SR 3.3.4.4 (DIGITAL)  
3.4.17 APPLICABILITY  
SR 3.4.17.2  
SR 3.6.11.3  
SR 3.8.1.3

NUREG-1434 BWR/6  
SR 3.1.2.1  
SR 3.1.4.1  
SR 3.8.1.3

# DRAFT

## GENERIC SAFETY EVALUATION ON THE REVISION TO TECHNICAL SPECIFICATIONS (TS) BY ADOPTING THE TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) CHANGE TRAVELER, TSTF-404 SCRAM DISCHARGE VOLUME (SDV) VENT AND DRAIN VALVES

### 1.0 INTRODUCTION

By letter dated [ ], [Licensee's Corporate Name] ([ ]/Licensee) submitted a request for changes to the [ Nuclear Plant's] Technical Specifications (TS). The requested changes would revise the action to TS 3.1.8 "Scram Discharge Volume (SDV) Vent and Drain Valves" for one or more SDV vent or drain lines with one valve inoperable. This revision approves changes that would allow associated line isolation rather than requiring restoration of valve operability. In addition the Note in Required Action B.1 allowing the isolated line to be unisolated under administrative controls to allow draining and venting, now applies to all Conditions in TS 3.1.8. The applicable TS Bases have been revised to document the TS changes and provide supporting information. These changes are based on Technical Specification Task Force (TSTF) change traveler, TSTF-404, R0 that has been approved generically for the BWR/4[6] Standard Technical Specifications (STS), NUREG-1433 [1434], Revision 2.

### 2.0 BACKGROUND

The existing LCO 3.1.8, requires that each SDV vent and drain valve be OPERABLE. The OPERABILITY of all SDV vent and drain valves ensures that the SDV vent and drain valves will close during a scram to contain reactor water discharged to the SDV piping. Since the vent and drain lines are provided with two valves in series, the single failure of one valve in the open position will not impair the isolation function of the system. Additionally, the valves are required to open on scram reset to ensure that a path is available for the SDV piping to drain freely at other times.

If one or more SDV vent and drain lines have a single valve that is inoperable, the Required Actions require that the valve(s) be restored to OPERABLE status within 7 days. If the valve(s) is not restored to OPERABLE status, a plant shutdown to MODE 3 is required within 12 hours. If one or more SDV vent or drain lines have both valves inoperable, the associated line must be isolated within 8 hours. In this condition, the plant is allowed to operate indefinitely. The SDV vent and drain valve actions are inconsistent in that the actions for a single inoperable valve in a line are more severe than the actions for both valves in a line being inoperable.

The proposed change would revise the Required Actions to be more consistent with the safety significance of one inoperable valve in a SDV line versus two inoperable valves in an SDV line.

ENCLOSURE 2

# DRAFT

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## 3.0 EVALUATION

The proposed changes to TS 3.1.8 are:

1. Required Action A.1 is revised from restoring the single inoperable SDV vent and drain valve in one or more SDV vent and drain lines to OPERABLE status to isolating the associated line. The associated Bases are revised accordingly.
2. The Note to Required Action B.1 which allows an isolated line to be unisolated under administrative controls for the purpose of draining and venting the SDV now applies to both Conditions A and B. The Note is moved to an ACTIONS Note. The associated Bases are revised accordingly.

With one SDV vent or drain valve inoperable in one or more lines, the isolation function would be maintained since the redundant valve in the affected line would perform its safety function of isolating the SDV. The current ACTION statement allows 7 days to repair the inoperable valve; the proposed change is to allow for the isolation of the affected line and continue operation. If the affected line is not isolated within the 7 day time period, the licensee would then be required to proceed to MODE 3 in the next 12 hours. The 7 day Completion Time is acceptable because of the low probability of the concurrent events of a scram within the 7 days of the Completion Time and a failure of the redundant valve(s). Alternately, if the inoperable valve was initially closed, there is ample time and warning available to drain the SDV before the automatic scram due to SDV high level would occur.

The allowance to administratively open a line that is isolated to comply with the actions (to permit draining and venting the SDV) is allowed by existing Required Action B.1. This allowance is being moved to apply to all ACTIONS based on the change proposed to ACTION A. This would allow any accumulated water in the line to be drained, to preclude a reactor scram on SDV high level. This allowance is acceptable, since the remaining operable SDV vent and drain valve(s) would close automatically on a scram signal to isolate the lines. Or, if both valves in a line were inoperable (and opened under this provision), the reactor coolant release could be terminated by resetting the scram from the control room, or by manually closing the valves locally. Resetting the scram automatically closes the scram outlet valves, isolating the CRD discharge path to the SDV.

Based on the low probability of an event occurring during this condition and the ability to pen and drain the lines before an automatic scram due to SDV high water level and to isolate them to minimize the consequences during an event, the proposed change is considered acceptable and is in conformance with TSTF-404, R.0

## CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by the operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

TSTF-404 will be processed through the CLIIP as requested by the TSTF. The Draft Safety Evaluation is enclosed with this letter for your information, and may be modified through public comments. Formal approval of TSTF-404 for adoption by licensees is subject to completion of the CLIIP public comments process.

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 (2)

cc: J. Arbuckle, BWROG  
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