



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 8, 2017

MEMORANDUM TO: David J. Wrona, Branch Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Russell S. Haskell II, Project Manager */RA/*
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF OCTOBER 27, 2017, MEETING REGARDING
LICENSE AMENDMENT REQUESTS TO ADOPT TECHNICAL
SPECIFICATION TASK FORCE-542, REVISION 2, "REACTOR
PRESSURE VESSEL WATER INVENTORY CONTROL" (CAC NO.
TM3058, EPID: F-2017-FIP-0001)

On October 27, 2017, a Category 2 public teleconference was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the Technical Specification Task Force (TSTF), and Boiling Water Reactor Owners Group (BWROG). The purpose of the teleconference was to discuss: (1) proposed technical variation to licensee amendment requests to adopt TSTF-542, Revision 2, "Reactor Pressure Vessel Water Inventory Control," for the BWR (boiling-water reactor)/5 and BWR/6 design plants regarding high pressure core spray (HPCS), details of the proposed variation are available in Agencywide Documents Access and Management System (ADAMS) package at Accession No. ML17289A902; and (2) the interaction between previously approved TSTF-484, Revision 0, "Use of TS 3.10.1 for Scram Time Testing activities" and TSTF-542, Revision 2. The teleconference announcement and agenda are available in ADAMS at Accession No. ML17298B796. A list of attendees is enclosed.

The TSTF representatives presented information regarding a TSTF-542, Revision 2, requirement that HPCS may be credited as the operable emergency core cooling system (ECCS) subsystem to meet technical specification (TS) 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control." TSTF-542, Revision 2, TS Table 3.3.5.2-1, "RPV Water Inventory Control Instrumentation," requires the HPCS Level 8, Function 3.a, and the HPCS manual initiation Function 3.e to be OPERABLE. In BWR/5 and BWR/6 designs, the HPCS Level 8 function closes the HPCS system injection valve preventing RPV injection until RPV water level drops below a specific setpoint. TSTF/BWROG representatives believe this to be a less than desirable operational restraint in order to meet the new requirements of TSTF-542, Revision 2. As such, the TSTF/BWROG representatives proposed to remove HPCS Function 3.a and Function 3.e from the TSTF-542, Revision 2, requirement. This would allow the impacted sites¹ to credit the manual initiation of HPCS by starting the pump and manually opening the HPCS injection valve (defeating the interlock). The NRC staff acknowledged the proposed variation and commented that control room operators would need easy access to defeat the interlocks to manually initiate HPCS. The NRC staff commented that plant procedures and any mechanical or instrumentation manipulations need to be easily accessible for operators to promptly inject, if

¹ Nine Mile Point 2; Clinton; Columbia Generating Station; River Bend 1; Perry; LaSalle 1,2; and Grand Gulf

needed. TSTF/BWROG representatives indicated several licensees have proceduralized manual injection in their off-normal procedures. A licensee senior reactor operator interjected that ECCS manual injection activities are performed in plant simulators as part of routine operator training. The NRC staff questioned whether the TSTF-542, Revision 2, surveillance requirements were adequate to ensure the HPCS can be manually injected. The NRC staff questioned the status of the main steam line plugs during conditions if HPCS would be required to be manually injected. The TSTF/BWROG representatives responded that they would convene with industry to address the NRC staff's comments and indicated they were sensitive to timing constraints associated with the TSTF-542, Revision 2, issuance schedules. The NRC staff and TSTF/BWROG representatives agreed to discuss either resolution or next steps during a Category 2 meeting scheduled for November 9, 2017 (ADAMS Accession No. ML17303A162).

The NRC staff and TSTF/BWROG representatives also discussed the interaction between ECCS injection/spray subsystem requirements as specified in STS 3.10.1 and TSTF-542, Revision 2. The discussion included the apparent MODE 4 inconsistency between travelers TSTF-484 and TSTF-542. STS limiting condition for operation (LCO) 3.10.1 allows operations in which reactor coolant system (RCS) temperature requirements are changed as a consequence of maintaining reactor pressure. The intent of TSTF-484, Revision 0, was to allow licensees to gain greater testing efficiency when exiting refueling outages by allowing RCS temperature to exceed 200 degrees Fahrenheit (°F) as a consequence of maintaining reactor pressure for inservice leak and hydrostatic test, or as a consequence of maintaining reactor pressure for scram time testing initiated in conjunction with an inservice leak or hydrostatic test, when initial test conditions were below 200 °F. The NRC staff and TSTF/BWROG representatives discussed that during TS 3.10.1 testing, as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix G, "Fracture Toughness Requirements," the MODE 4 temperature requirements are relaxed to perform certain tests (i.e., scram time testing, hydrostatic and leakage testing). The NRC staff contended that TS 3.10.1 special operation testing is typically performed at elevated RCS temperatures and pressures. Therefore, pre-TSTF-542, Revision 2, STS LCO 3.5.2, "ECCS-Shutdown," MODE 4 requirement that "two low pressure ECCS injection/spray subsystems shall be OPERABLE," is necessary. TSTF-542, Revision 2, revises and renames LCO 3.5.2 as "Reactor Pressure Vessel (RPV) Water Inventory Control." The TSTF-542, Revision 2, LCO 3.5.2 is applicable in MODE 4 and requires both sufficient RPV water inventory above the top of active fuel and one low pressure ECCS injection/spray subsystem shall be OPERABLE. The TSTF-542, Revision 2, LCO 3.5.2, would also affect the STS 3.10.1 testing conditions (potentially greater than 200 °F and near operating pressure, approximately 1000 pounds per square inch (psig)) with "one low pressure ECCS injection/spray subsystem required to be OPERABLE." The NRC staff believes that this was not the intended result between the two travelers. The TSTF/BWROG representatives countered that typically many injection sources are OPERABLE during TS 3.10.1 special testing activities.

There were no final determinations made during the teleconference. The TSTF/BWROG representatives stated that they understood the NRC staff concerns and, as indicated above, there would be a follow-up discussion to either propose a resolution or discuss next steps during the upcoming Category 2 meeting scheduled for November 9, 2017. There were no members of the public identified on the teleconference. Information regarding feedback forms was presented to the attendees. No public meeting feedback forms were received.

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Enclosure: List of Attendees

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OFFICE	NRR/DORL/LPL3/PM	NRR/DORL/LPL3/LA	NRR/DORL/LPL3/BC	NRR/DORL/LPL3/PM
NAME	RHaskell	SRohrer	DWrona	RHaskell
DATE	11/7/17	11/7/17	11/8/17	11/8/17

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LIST OF ATTENDEES

Jennifer Whitman	NRC
Margaret Chernoff	NRC
Larry Wheeler	NRC
Ravi Grover	NRC
Pete Snyder	NRC
Diana Woodyatt	NRC
Muhammad Razzaque	NRC
Khadijah West	NRC
Daniel Warner	NRC
Randy Hall	NRC
Rick Ennis	NRC
Tom Wengert	NRC
Farideh Saba	NRC
Jenny Tobin	NRC
Sue Goetz	NRC
Kim Green	NRC
Lisa Regner	NRC
Booma Venkataraman	NRC
Carleen Parker	NRC
Mike Marshall	NRC
Lisa Regner	NRC
V. Sreenivas	NRC
Russ Haskell	NRC
Alan Rabenold	First Energy
Phillip Lashley	First Energy
Lisa Williams	Energy Northwest
Brian Mann	EXCEL Services Corporation
Bill Victor	EXCEL Services Corporation
Mitchel Mathews	Exelon

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