

October 3, 2016

Technical Specifications Task Force  
11921 Rockville Pike, Suite 100  
Rockville, MD 20852

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RE: TRAVELER TSTF-546,  
REVISION 0, "REVISE APRM CHANNEL ADJUSTMENT SURVEILLANCE  
REQUIREMENT" (TAC NO. MF7622)

Dear Members of the Technical Specifications Task Force:

By letter dated April 21, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16112A208), you submitted to the U.S. Nuclear Regulatory Commission (NRC) for review and approval Traveler TSTF-546, Revision 0, "Revise APRM [Average Power Range Monitor] Channel Adjustment Surveillance Requirement." Upon review of the information provided, the NRC staff has determined that additional information is needed to complete the review. On September 27, 2016, Brian Mann, Vice President of Industry Programs, EXCEL Services Corporation, and I agreed that the NRC staff will receive your response to the enclosed request for additional information (RAI) questions within 90 calendar days of the date of this letter (or the next business day if 90 days falls on a weekend).

The review schedule below that was provided in the acceptance letter dated August 12, 2016 (ADAMS Accession No. ML16194A010) is still valid.

MILESTONE	SCHEDULE DATE
Issue Draft Safety Evaluation	June 7, 2017
Issue Final Safety Evaluation	September 21, 2017

If you have any questions, please contact me at (301) 415-1774 or via e-mail to [Michelle.Honcharik@nrc.gov](mailto:Michelle.Honcharik@nrc.gov).

Sincerely,

**/RA by Lynnea Wilkins for/**

Michelle C. Honcharik, Senior Project Manager  
Licensing Processes Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

Project No. 753

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11921 Rockville Pike, Suite 100  
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*/RA by Lynnea Wilkins for/*

Michelle C. Honcharik, Senior Project Manager  
Licensing Processes Branch  
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Enclosure:  
As stated

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ADAMS Accession No.: ML16271A218 \*concurring via e-mail

NRR-106

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DATE	10/3/2016	9/27/2016	8/16/2016	9/30/2016	10/3/2016

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Technical Specifications Task Force

Project No. 753

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## **REQUEST FOR ADDITIONAL INFORMATION**

### **TSTF-546, "REVISE APRM CHANNEL ADJUSTMENT SURVEILLANCE REQUIREMENT"**

#### **(TAC NO. MF7622)**

By letter dated April 21, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16112A208), the Technical Specifications (TS) Task Force (TSTF) submitted to the U.S. Nuclear Regulatory Commission (NRC) for review Traveler TSTF-546, Revision 0, "Revise APRM [average power range monitor] Channel Adjustment Surveillance Requirement [(SR)]."

TSTF-546 relies on the premise that a high APRM setting is conservative, requests applicability for all boiling water reactors (BWRs), and uses an approach similar to that taken in the Westinghouse Electric Company (Westinghouse) Standard Technical Specifications (STS). However, for BWRs with detect and suppress reactor protection system (RPS) trip (e.g., oscillation power range monitor (OPRM) trip), a high APRM reading (for which the detect and suppress trip relies on the same instrumentation) has the potential to be non-conservative, unlike Westinghouse plants which do not have such a system. Specifically, some BWRs have the following notes in SR 3.3.1.1.9 and SR 3.3.1.1.11.

Note 1 states that neutron detectors are excluded from CHANNEL CALIBRATION because they are passive devices, with minimal drift, and because of the difficulty of simulating a meaningful signal. Changes in neutron detector sensitivity are compensated for by performing the 7-day calorimetric calibration (SR 3.3.1.1.2) and the [1000] MWD/T LPRM calibration against the transverse in-core probes (SR 3.3.1.1.6).

A second Note is provided that requires the APRM and intermediate range monitor (IRM) SRs to be performed within 12 hours of entering MODE 2 from MODE 1. Testing of the MODE 2 APRM and IRM functions cannot be performed in MODE 1 without utilizing jumpers, lifted leads, or movable links. This Note allows entry into MODE 2 from MODE 1 if the associated Frequency is not met per SR 3.0.2. Twelve hours is based on operating experience and in consideration of providing a reasonable time in which to complete the SR.

A signal that is biased high has the potential to reduce sensitivity in the OPRM trip. Further, a noisier signal, at certain frequencies, has the potential to either delay required reactor scrams or lead to an increase in spurious reactor scrams.

- a. Considering that for some stability solutions a high local power range monitor signal is potentially non-conservative and stability solutions are not part of the STS, describe how the Model Application will address the different plant-specific stability solutions.
- b. Demonstrate that not meeting SR 3.3.1.1.2 due to a high APRM signal is always conservative for RPS trips that rely on SR 3.3.1.1.2, directly or indirectly, specifically address each stability solution.
- c. If it cannot be demonstrated that not meeting SR 3.3.1.1.2 due to a high APRM signal is always conservative for RPS trips that rely on SR 3.3.1.1.2, directly or indirectly, for every BWR then provide a justification for TSTF-546 to be applicable to all BWRs.

Enclosure