NRR-DMPSPEm Resource

From: Lingam, Siva
Sent: Tuesday, April 24, 2018 4:15 PM
To: Neve, Douglas A
Cc: Pascarelli, Robert; Stattel, Richard; Singh, Gursharan; Peng, Shie-Jeng; Waters, Michael
Subject: Grand Gulf - Acceptance Review of LAR Associated with Replacement of Turbine First Stage Pressure Signals with Power Range Neutron Monitoring System Signals to Measure Reactor Power (EPID: L-2018-LLA-0072)

By letter dated March 26, 2018 (Agencywide Documents Access and Management System Accession No. ML18085A579), Entergy (the licensee) submitted a license amendment request (LAR) to revise Updated Final safety Analysis Report for the replacement of turbine first stage pressure (TFSP) signals with power range neutron monitoring system (PRNMS) signals for Grand Gulf Nuclear Station, Unit 1 (GGNS). During June 2014, the licensee implemented Engineering Change (EC) 49880 in accordance with 10 CFR 50.59, "Changes, tests, and experiments," that replaced the use of the TFSP instruments with the PRNMS to measure reactor power. On December 9, 2016, the Nuclear Regulatory Commission (NRC) issued NRC Inspection Report 05000416/2016007. In this inspection report, the NRC issued non-cited violation 05000416/2016007-02, which identified that the licensee failed to obtain a license amendment prior to implementing the proposed change. Specifically, modification EC 49880 eliminated the TFSP instrument signals to the Reactor Protection System and replaced the signals with average power range monitor signals. The NRC concluded the change reduced the diversity and resulted in a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety.

The licensee has determined that the proposed change requires NRC approval per 10 CFR 50.59(c)(2). The licensee concluded that the plant modification is potentially a reduction in diversity based on the GGNS licensing basis. As such, the potential reduction in diversity is considered to be a change that results in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety previously evaluated in the UFSAR.

The proposed LAR eliminates the potential for a transient caused by the mechanical failure of the TFSP sensing lines and instruments. It also eliminates process delays in the steam lines as the PRNMS voltage output signals are based on average power range monitoring signals, a direct and immediate measurement of neutron flux. The PRNMS signals are divisionally separated, safety-related and provide reliability, quality and defense-in-depth that the TFSP sensing lines and instruments could not provide. The replacement of the TFSP output signals with the PRNMS output signals enhances plant safety and improves reliability.

The purpose of this letter is to provide the results of the NRC staff's acceptance review. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

The NRC staff has reviewed your application and concluded that it does provide technical information in sufficient detail to enable the NRC staff to complete its detailed technical review and make an independent assessment regarding the acceptability of the proposed LAR in terms of regulatory requirements and the protection of public health and safety and the environment. Given the lesser scope and depth of the acceptance review as compared to the detailed technical review, there may be instances in which issues that impact the NRC staff's ability to complete the detailed technical review are identified despite completion of an adequate acceptance review. You will be advised of any further information needed to support the NRC staff's detailed technical review by separate correspondence.

Based on the information provided in your submittal, the NRC staff has estimated that this licensing request will take approximately 300 hours to complete. The NRC staff expects to complete this review approximately by April 8, 2019. If there are emergent complexities or challenges in our review that would cause changes to the initial forecasted completion date or significant changes in the forecasted hours, the reasons for the changes, along with the new estimates, will be communicated during the routine interactions with the assigned project manager. These estimates are based on the NRC staff's initial review of the application and they could change, due to several factors including requests for additional information, or unanticipated addition of scope to the review.

If you have any questions, please contact me at (301) 415-1564.

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