



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

February 22, 2013

Mr. Timothy S. Rausch
Senior Vice President and Chief Nuclear Officer
PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603-0467

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 – REQUEST FOR ADDITIONAL INFORMATION REGARDING REQUEST FOR CHANGES TO TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT 3.8.1.19 TO INCREASE DIESEL GENERATOR E MINIMUM STEADY STATE FREQUENCY (TAC NOS. ME9609 AND ME9610)

Dear Mr. Rausch:

By letter dated September 18, 2012,¹ PPL Susquehanna, LLC submitted a license amendment request for Susquehanna Steam Electric Station, Units 1 and 2. The proposed amendment would make changes to Technical Specification (TS) Surveillance Requirement (SR) 3.8.1.19 in TS 3.8.1, "AC Source – Operating." Specifically, the proposed amendment would increase the minimum steady state frequency for Diesel Generator E during the loss of offsite power and Emergency Core Cooling System surveillance. To complete its review, the Nuclear Regulatory Commission staff requests responses to the enclosed questions.

The draft questions were sent to Mr. Jason Jennings, of your staff, to ensure that the questions were understandable, the regulatory basis for the questions was clear, and to determine if the information was previously docketed. On February 19, 2013, Mr. Jennings agreed that you would provide a response by March 1, 2013.

If you have any questions regarding this matter, please contact me at 301-415-4090.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey A. Whited".

Jeffrey A. Whited, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosure:
Request for Additional Information

cc w/encl: Distribution via Listserv

¹ Agencywide Documents Access and Management System Accession No. ML12262A321.

REQUEST FOR ADDITIONAL INFORMATION
REGARDING PROPOSED LICENSE AMENDMENTS
CHANGE TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENTS
TO INCREASE DIESEL GENERATOR MINIMUM STEADY STATE FREQUENCY
SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2
DOCKET NOS. 50-387 AND 50-388

By letter to the Nuclear Regulatory Commission (NRC) dated September 18, 2012,¹ PPL Susquehanna, LLC (PPL, the licensee) submitted a license amendment request (LAR) for Susquehanna Steam Electric Station (SSES), Units 1 and 2. The proposed amendments would change Surveillance Requirement (SR) 3.8.1.19 in Technical Specification (TS) 3.8.1, "AC Sources-Operating." Specifically, the proposed amendments would increase the minimum steady state frequency for Diesel Generator (DG) E during the loss of offsite power and Emergency Core Cooling System surveillance.

The NRC staff has reviewed the information that the licensee provided in support of its proposed license amendments. In order for the staff to complete its review, the licensee is requested to address the following requests for additional information.

Consistent with the requirements in Section 50.36 of Title 10 of the *Code of Federal Regulations*, SRs must assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operations are met. The NRC staff considers that all SRs in TS 3.8.1 associated with the DG demonstrate operational readiness of the DG to perform its intended safety functions as delineated in the Final Safety Analysis Report Section 8.1.1. The proposed change modifies frequency requirements in SR 3.8.1.19 only.

RAI 1: Explain why the steady state frequency requirements in SR 3.8.1.7, SR 3.8.1.11, SR 3.8.1.12, SR 3.8.1.15, and SR 3.8.1.20 are not considered applicable for demonstrating that the DG will perform its intended safety functions. The staff recognizes that some surveillances with DG in droop mode require manual actions to achieve the required parameters.

The LAR states that the steady state frequency requirements for DGs A-D are acceptable and a SSES calculation justifies the ± 1.2 Hertz ($\pm 2\%$) range in the current TS. Provide excerpts from the calculation that verify the following:

RAI 2: With the DGs operating at the lower end of the allowable frequency and voltage ranges, the flow requirements of emergency safety feature (ESF) pumps are not adversely impacted and the shift in operating point of induction motors does not impact DG loading.

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- RAI 3: Motor-operated valve performance (in accident analyses) is not adversely impacted at the lower end of the steady state TS allowable frequency range coupled with the frequency and voltage variations experienced during load sequencing.
- RAI 4: With the DGs operating at the upper end of the allowable frequency range, the speed change in ESF motors does not increase the DG loading such that the postulated accident loading exceeds the TS SRs.

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/ra/

Jeffrey A. Whited, Project Manager
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*via memo dated

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