

February 12, 2013

MEMORANDUM TO: Meena K Khanna, Chief  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Roy Mathew, Acting Chief **/RA/**  
Electrical Engineering Branch  
Division of Engineering  
Office of Nuclear Reactor Regulation

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION PROPOSED  
AMENDMENT NO. 309 TO LICENSE NPF-14 AND PROPOSED  
AMENDMENT NO. 280 TO LICENSE NPF-22: CHANGE TO  
TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT  
(SR) 3.8.1.9, 3.8.1.11, 3.8.1.12, AND 3.8.1.19 TO INCREASE  
DIESEL GENERATOR MINIMUM STEADY STATE VOLTAGE  
(TAC NO. ME9607)

By letter dated September 18, 2012 (Agencywide Documents Access and Management System Accession No. ML12262A322), PPL Susquehanna, LLC (PPL) submitted a request for amendment to the Technical Specifications (TS), of the Facility Operating License No. NPF-14 and NPF22 for the Susquehanna Steam Electric Station (SSES). The changes would modify the TS Surveillance Requirements (SR) 3.8.1.9, 3.8.1.11, 3.8.1.12 and 3.8.1.19, in TS 3.8.1 that will improve operation and testing of Diesel Generators (DG) and will provide a more restrictive voltage band for operation.

In an effort to complete our review, the EEEB staff has attached a request for additional information that should be transmitted to the licensee for a formal written response. The written response should be provided to the EEEB staff within 45 days upon the issuance date of this memorandum

Enclosure:  
As stated

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**ADAMS ACCESSION No.: ML13043A406**

OFFICE	NRR/DE/EEEB	NRR/DE/EEEB	NRR/DE/EEEB
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DATE	02/1/13	02/1 /13	02/12/13

**OFFICIAL RECORD COPY**

**REQUEST FOR ADDITIONAL INFORMATION**  
**REGARDING SUSQUEHANNA STEAM ELECTRIC STATION**  
**LICENSE AMENDMENT REQUEST TO CHANGE**  
**DIESEL GENERATOR SURVEILLANCE REQUIREMENTS**  
**TAC NO. ME9607**

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Surveillance requirements 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 Electrical Engineering Branch has reviewed the license amendment request (LAR) and developed the following questions regarding the proposed change.

1. The proposed change modifies voltage requirements in selective SRs only. The License Amendment Request (LAR) states that SRs associated with DG operation in droop mode are not being revised as voltage and frequency are manually adjusted to allow connection to the grid. The staff considers that all SRs in TS 3.8.1, associated with the DG, demonstrate operational readiness of the DG to perform its intended design functions as delineated in the SSES FSAR Section 8.1.1. The SRs which require DG operation in droop mode should also demonstrate the ability of the DG to achieve required voltage and frequency prior to connecting to the grid. Explain:
  - a. The intent of the voltage range in the SRs not included for change in the amendment.
  - b. How the steady state voltage requirements, currently associated with droop mode SRs, will demonstrate DG operability if the safety busses are below the minimum required 4000 Volts proposed in the LAR.
2. The LAR proposes a new voltage range of  $\geq 4000$  V and  $\leq 4400$  V for SRs 3.8.1.9, 3.8.1.11, 3.8.1.12 and 3.8.1.19. The current requirements of induction motors and other voltage sensitive equipment vary according to available voltage and frequency. Provide excerpts from calculations that validate DG loading when operating at extremes of the proposed voltage range.

ENCLOSURE