

February 1, 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) 3.8.1.19 TO INCREASE DIESEL
GENERATOR E MINIMUM STEADY STATE FREQUENCY–
REQUEST FOR ADDITIONAL INFORMATION (TAC NO.
ME9609)

By letter dated September 18, 2012 (Agencywide Documents Access and Management System Accession No. ML12262A321), 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) 3.8.1.19 in TS 3.8.1 that will improve operation and testing of diesel generators (DG) E and will provide a more restrictive frequency 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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REQUEST FOR ADDITIONAL INFORMATION
REGARDING SUSQUEHANNA STEAM ELECTRIC STATION
LICENSE AMENDMENT REQUEST TO CHANGE
DIESEL GENERATOR SURVEILLANCE REQUIREMENTS
TAC NO. ME9609

By letter dated September 18, 2012 (Agencywide Documents Access and Management System Accession No. ML12262A321), 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) 3.8.1.19 in TS 3.8.1 that will improve operation and testing of Diesel Generators (DG) E and will provide a more restrictive frequency band for operation. The proposed amendment changes new minimum steady state frequency for Diesel Generator E during a Loss of Offsite Power (LOOP) & Emergency Core Cooling System (ECCS) surveillances only.

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

1. 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 safety functions as delineated in the FSAR Section 8.1.1. The proposed change modifies frequency requirements in SR 3.8.1.19 only. 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 DG to perform its intended safety functions. The staff recognizes that some surveillance with DG in droop mode require manual actions to achieve the required parameters.
2. The LAR states that the steady state frequency requirements for DGs A-D are acceptable and a SSES calculation justifies the ± 1.2 Hz ($\pm 2\%$) range in the current TS. Provide excerpts from the calculation that verify the following:
 - a. With the DGs operating at the lower end of the allowable frequency and voltage, the flow requirements of emergency safety features (ESF) pumps are not adversely impacted and the shift in operating point of induction motors does not impact DG loading.
 - b. Validate that motor operated valve performance (in accident analyses) is not adversely impacted at the lower end of the steady state TS allowable frequency coupled with the frequency and voltage variations experienced during load sequencing.
 - c. With the DGs operating at upper end of the allowable frequency, the speed change in ESF motors does not increase the DG loading such that the postulated accident loading exceeds the TS surveillance requirements.

ENCLOSURE