



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

September 24, 2012

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNIT NOS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION RELATED TO LICENSE AMENDMENT REQUEST FOR REVISE TECHNICAL SPECIFICATIONS (TS) 3.3.1, "REACTOR TRIP SYSTEM (RTS) INSTRUMENTATION," AND TS 3.3.2, "ENGINEERING SAFETY FEATURE ACTUATION SYSTEM (ESFAS) INSTRUMENTATION" (TAC NOS. ME8881, ME8882, ME8883, AND ME8884)

Dear Mr. Pacilio:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated June 6, 2012 (Agencywide Document Access and Management System (ADAMS) Accession No. ML12159A304), Exelon Generation Company, LLC (the licensee), submitted a license amendment request (LAR) to revise the technical specifications (TS) of Byron Station, Unit Nos. 1 and 2 and Braidwood Station, Units 1 and 2. Specifically, the proposed license amendment would revise TS 3.3.1, "Reactor Trip System (RTS) Instrumentation" and TS 3.3.2, "Engineered Safety Features Actuation System (ESFAS)," to allow certain functions in the RTS and ESFAS instrumentation to be tested in bypass.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed in the enclosure to this letter. During a discussion with your staff on September 10, 2012, it was agreed that you would provide a response within 60 days from the date of this letter.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources.

M. Pacilio

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If you have any questions regarding this matter, please contact me at (301)-415-3867.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Mahoney", with a long, sweeping horizontal stroke extending to the right.

Michael Mahoney, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455,
STN 50-456, and STN 50-457

Enclosure:
Request for additional information

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REQUEST FOR ADDITIONAL INFORMATION

BYRON STATION, UNIT NOS. 1 AND 2

BRAIDWOOD STATION, UNITS 1 AND 2

DOCKET NOS. STN 50-454, STN 50-45, STN 50-456, and STN 50-457

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated June 6, 2012 (Agencywide Document Access and Management System (ADAMS) Accession No. ML12159A304), Exelon Generation Company, LLC (the licensee), submitted a license amendment request (LAR) to revise the technical specifications (TS) of Byron Station, Unit Nos 1 and 2, and Braidwood Station, Units 1 and 2.

The proposed amendment will add a Note to Surveillance Requirements (SR) 3.3.1.7, 3.3.1.8, and 3.3.1.12 in TS 3.3.1, Reactor Trip System (RTS) Instrumentation, and SRs 3.3.2.2 and 3.3.2.6 in TS 3.3.2, Engineered Safety Features Actuation System (ESFAS) Instrumentation, to exclude the Solid State Protection System (SSPS) input relays from the channel operational test (COT) surveillance for RTS and ESFAS functions with installed bypass capability which the NRC approved by letters dated March 30, 2012, and April 9, 2012 (ADAMS Accession Nos. ML120660494 and ML120950371, respectively).

The SSPS input relays are currently tested during a COT that is performed in accordance with the licensee's surveillance frequency control program (SFCP) at a frequency of 184 days or 6 months.

The licensee states in the LAR that the proposed change is needed to support utilization of bypass test capability that is being installed to reduce the potential for unnecessary reactor trips or engineered safeguards actuation due to a failure or transient in a redundant channel. The licensee further states that cycling of the complete channel with associated SSPS input relays could result in a partial trip of the actuation logic (i.e., from a two-out-of-four to one-out-of-three logic; or from two-out-of-three to one-out-of-two logic).

The licensee states that SRs 3.3.1.10, 3.3.1.11, and 3.3.2.10 require the performance of a channel calibration, and cycling the SSPS input relay. The SSPS input relay will be cycled during the performance of these SR's in accordance with the SFCP, on an 18-month frequency. These surveillances will verify operability of the SSPS input relays and provide assurance that there are no failures that would prevent the actuation of a required RTS or ESFAS function.

General Design Criteria (GDC) 21, "Protection system reliability and testability," in Title 10 of the *Code of Federal Regulations*, Part 50, Appendix A, states: "The protection systems shall be designed for functional reliability and inservice testability commensurate with the safety functions to be performed."

The NRC staff requests the following information to complete its review:

Provide a plant-specific analysis and/or technical basis that demonstrates how changes in the proposed LAR will comply with the functional reliability and inservice testing, as specified in GDC 21.

M. Pacilio

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If you have any questions regarding this matter, please contact me at (301)-415-3867.

Sincerely,

/ RA /

Michael Mahoney, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455,
STN 50-456, and STN 50-457

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ADAMS Accession No. ML12264A597

*Memo Dated

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