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

July 22, 2011

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

SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2, BYRON STATIONS, UNIT NOS. 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS WITH BYPASS TEST CAPABILITY (TAC NOS. ME5836, ME5837, ME5838, AND ME5839)

Dear Mr. Pacilio:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated March 14, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110760088), Exelon Generation Company, LLC (EGC, the licensee) requested NRC approval of an amendment to the Facility Operating Licenses for Braidwood Station (Braidwood), Units 1 and 2, and Byron Station (Byron), Unit Nos. 1 and 2. The proposed amendment would revise certain Required Action Notes in the Braidwood and Byron Technical Specifications (TS) 3.3.1, "Reactor Trip System Instrumentation" and TS 3.3.2, "Engineered Safety Features Actuation System Instrumentation," to reflect the planned installation of the bypass test capability.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete its review. The specific information requested is addressed in the enclosure to this letter. During a discussion with your staff on July 13, 2011, it was agreed that you would provide a response within 45 days from the date of this letter.

Please note that if you do not respond to this letter by the agreed-upon date or provide an acceptable alternate date in writing, we may reject your request for approval under the provisions of 10 CFR 2.108.

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 NRC staff resources.

If you have questions concerning this request, please contact me at (301) 415-1115 or Nicholas.DiFrancesco@nrc.gov.

Sincerely,

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

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

Enclosure:
Request for Additional Information

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

BRAIDWOOD STATION, UNITS 1 AND 2

DOCKET NOS. STN 50-456 AND STN 50-457

BYRON STATION, UNIT NOS. 1 AND 2

DOCKET NOS. STN 50-454 AND STN 50-455

In reviewing the Exelon Generation Company, LLC submittal dated March 14, 2011 (Agency Document and Management System Accession No. ML110760088), for Braidwood Station, Units 1 and 2, and Byron Station Unit Nos. 1 and 2, the U.S. Nuclear Regulatory Commission (NRC) staff has determined that the following information is needed in order to complete its review:

Request for Additional Information (RAI) #1

Provide the schematic diagrams with and without bypass circuitry to illustrate the reactor trip functions with and without bypass capability and the pictures of the Nuclear Instrumentation System Bypass Panel and 7300 Bypass Protection System including the bypass keylock switches, toggle switches, and indications.

RAI Question #2

The submittal Westinghouse report WCAP-17349-P Revision 1, Section 4.2.2, states that a discussion of the Bypass Test Instrument (BTI) adherence to Institute of Electrical and Electronics Engineers (IEEE) Standard 379-1972 is found in Section 4.3. However, no description of analysis is provided. Please provide the analysis conducted in accordance with the IEEE Standard 379-1972.

RAI Question #3

Does this BTI involve any digital component or is it all analog?

RAI Question #4

If the BTI involves digital components, describe in detail how the BTI will conform to the IEEE Standard 603-1991.

RAI Question #5

If the BTI involves only analog systems, supplement the evaluation to describe how the design conforms to the following clauses of the IEEE Standard 279-1971:

4.6 Channel Independence
4.7.3 Single Random Failure

RAI Question #6

In Attachment 2 and 3 of your application dated March 14, 2011, Inserts A and B add the following NOTES to the Technical Specifications (TSs):

Insert A

1. For functions with installed bypass test capability, one channel may be bypassed for up to 12 hours for surveillance testing and setpoint adjustment.

2. For functions with no installed bypass test capability, the inoperable channel may be bypassed for up to 12 hours for surveillance testing and setpoint adjustment.

Insert B

1. For Functions with installed bypass test capability, one channel may be bypassed for up to 12 hours for surveillance testing.

2. For functions with no installed bypass test capability, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels.

Based on review of Table 3.3.1-1 and your application, it appears that Insert A/B Note 2 is not applicable to TS 3.3.1 Conditions D and E as all the applicable functions will have bypass test capability installed. Please remove Note 2 if not applicable to the Conditions that will contain functions with installed bypass.

Based on review of Table 3.3.2-1 and your application, it appears that Insert A/B Note 2 is not applicable to TS 3.3.2 Conditions D and K as all the applicable functions will have bypass test capability installed. Please remove Note 2 if not applicable to the Conditions that will contain functions with installed bypass.

For TS 3.3.1 Condition K, please explicitly define which functions Note 2 applies to the proposed design (e.g., Functions 12 and 13).

The NRC staff notes that the allowance for channel bypass is addressed in NUREG-1431, Revision 3, "Standard Technical Specification [STS] – Westinghouse Plants," and the content of your notes differ. Please justify deviating from the NRC staff position contained in the STS language or consider revising to incorporate STS wording.

If you have questions concerning this request, please contact me at (301) 415-1115 or Nicholas.DiFrancesco@nrc.gov.

Sincerely,

/RA/

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

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

Enclosure:
Request for Additional Information

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DISTRIBUTION:
PUBLIC
RidsNrrPMBraidwood Resource
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ADAMS Accession No. ML111860511 NRR-106 *via email

OFFICE	NRR/LPL3-2	NRR/LPL3-2/PM	NRR/LPL3-2/LA	NRR/LPL3-2/BC
NAME	ECarrico	NDiFrancesco	SRohrer	JZimmerman (MMahoney for)*
DATE	7/20/11	7/19/11	7/18/11	7/22/11

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