



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

December 6, 2012

Mr. Michael J. Pacilio
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO)
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 AND
SUSPENSION OF REVIEW OF LICENSE AMENDMENT REQUEST FOR
POWER UPRATE (TAC NOS. ME6587, ME6588, ME6589, AND ME6590)**

Dear Mr. Pacilio:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated June 23, 2011, Exelon Generation Company, LLC submitted a request to increase the licensed power based on measurement uncertainty recapture (MUR) for the Braidwood Station, Units 1 and 2, and Byron Station, Unit Nos. 1 and 2. By letter dated September 19, 2011, the NRC staff accepted the request for review. The NRC staff stated, however, that satisfactory disposition of the known nonconformance with turbine high-energy line break (HELB) would be required prior to implementation should the NRC staff approve the proposed license amendment request. The letter also stated that a license condition may be required to reflect resolution of this issue and that completion of the NRC staff's review could be delayed if the turbine building HELB analysis requires departure from the current licensing and design basis.

The guidance in NRC Regulatory Issue Summary (RIS) 2002-03, "Guidance on the Content of Measurement Uncertainty Recapture Power Uprate Applications," states that in areas for which the existing analyses of record do not bound the plant operation at the proposed uprated power level, the NRC staff will conduct a detailed review. In Attachment 1, Section III, of RIS 2002-03, analyses that are required by licensees to support licensing of the plant should be included in the scope of review. In accordance with this guidance, the NRC staff has determined that the current analyses of record for the HELB does not bound the requested uprated power level.

As a result of this determination, the NRC staff needs additional information to support resolution of the HELB nonconformance and complete a detailed review of the power uprate application. The specific information needed is requested in the enclosure to this letter. However, based on discussions with your staff, it is NRC staff's understanding that the modifications and analysis needed to support the NRC's review is not yet available. As such, because the needed information is not available to proceed, the NRC staff has

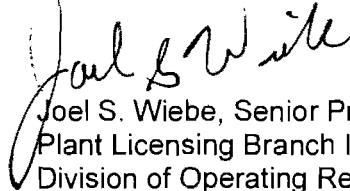
M. Pacilio

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suspended the review of the MUR pending the completion of the required modifications and analyses associated with the HELB nonconformance. The NRC staff has also determined that a confirmatory audit may be needed to validate that the resolution scope, including extent of condition, modifications, and analyses bound plant operations at the uprated power level.

If you have any questions, you may contact me at 301-415-6606 or via e-mail at Joel.Wiebe@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel S. Wiebe". The signature is fluid and cursive, with the first name "Joel" being more prominent.

Joel S. Wiebe, Senior 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 w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

BYRON STATION, UNIT NOS. 1 AND 2,

AND BRAIDWOOD STATION, UNITS 1 AND 2

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

STN 50-456 AND STN 50-457

The U.S. Nuclear Regulatory Commission (NRC) in reviewing the Exelon Generation Company's (Exelon's) submittal dated June 23, 2011, as supplemented, related to the request for measurement uncertainty recapture uprate for the Braidwood Station (Braidwood), Units 1 and 2, and Byron Station (Byron), Unit Nos. 1 and 2, the NRC staff has determined that the following information is needed in order to complete its review:

1. Provide a summary of the results of your extent-of-condition review related to the high-energy line break (HELB) non-conformance.
2. For those HELB analyses that were not affected by the non-conformance:
 - a. Identify the HELB area(s) that is the subject of the analysis.
 - b. Provide confirmation that:
 - i. The analyses of record are in conformance with the licensing and design basis of the plant.
 - ii. The analyses of record either have been previously approved by the NRC or were conducted using methods or processes that were previously approved by the NRC.
 - c. Confirm that the equipment environmental qualification parameters continue to be bounded.
3. For those HELB area(s) that were affected by the non-conformance:
 - a. Identify the HELB area(s) that is the subject of the analysis.
 - b. Identify the important analysis inputs and assumptions (including their values), and explicitly identify those that changed as a result of the resolution of the nonconformance.
 - c. Confirm that the equipment environmental qualification parameters continue to be bounded.
 - d. Identify the methodologies used to perform the analyses, and describe any changes in those methodologies.

Enclosure

- e. Confirm that the analyses were performed in accordance with any limitations and restrictions included in the NRC's approval of the methodology.
 - f. Describe the sequence of events and explicitly identify those that changed as a result of the resolution of the nonconformance.
 - g. Describe and justify the chosen single-failure assumption.
 - h. Provide plots of important parameters and explicitly identify those that changed as a result of the resolution of the nonconformance.
 - i. Discuss any plant modifications required to support the analysis.
 - j. Discuss the results and acceptance criteria for the analysis, including any changes from the previous analysis.
4. Provide confirmation that you are ready for an NRC staff audit to confirm that your resolution of the HELB non-conformance has restored the licensing and design basis of the plants and bound operation at the uprated power level. The audit is expected to include an extent-of-condition review, analyses, and installed modifications.

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suspended the review of the MUR pending the completion of the required modifications and analyses associated with the HELB nonconformance. The NRC staff has also determined that a confirmatory audit may be needed to validate that the resolution scope, including extent of condition, modifications, and analyses bound plant operations at the uprated power level.

If you have any questions, you may contact me at 301-415-6606 or via e-mail at Joel.Wiebe@nrc.gov.

Sincerely,

/ RA /

Joel S. Wiebe, Senior 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

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Request for Additional Information

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NAME	JWiebe	SRohrer	MDudek	MEvans	JWiebe
DATE	11/ 08/12	11/15/12	11/21/12	11/29/12	12/06/12

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