



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

July 20, 2010

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 - REQUEST FOR ADDITIONAL  
INFORMATION RELATED TO LICENSE AMENDMENT REQUEST TO ADOPT  
TSTF-425, REVISION 3 (TAC NOS. ME3368 AND ME3369)

Dear Mr. Pacilio:

By letter to the Nuclear Regulatory Commission (NRC) dated February 15, 2010 (Agencywide Documents Access and Management System Accession No. ML100480008), Exelon Generation Company, LLC (the licensee), submitted a license amendment request to allow relocation of specific technical specification (TS) surveillance frequencies to a licensee-controlled program in accordance with TS Task Force (TSTF) Traveler, TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control - Risk Informed Technical Specification Task Force (RITSTF) Initiative 5b."

The NRC staff is reviewing your submittals, and has determined that additional information is required to complete its review. The specific information requested is addressed in the enclosed Request for Additional Information (RAI). The RAI was discussed with your staff on June 28, 2010; they agreed to respond within 30 days after 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. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-1547.

Sincerely,

A handwritten signature in black ink, appearing to read "Marshall J. David", is written over a circular stamp that is partially obscured.

Marshall J. David, Senior Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454 and STN 50-455

Enclosure:  
Request for Additional Information

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REQUEST FOR ADDITIONAL INFORMATION

BYRON STATION, UNIT NOS. 1 AND 2

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

The Nuclear Regulatory Commission (NRC) staff is reviewing Exelon Generation Company, LLC's (the licensee's) license amendment request (LAR) dated February 15, 2010 (Agencywide Documents Access and Management System Accession No. ML100480008), for Byron Station, Unit Nos. 1 and 2. The LAR requests to adopt NRC-approved changes to the Standard Technical Specifications (TS) for Westinghouse plants (NUREG-1431), to allow relocation of specific TS surveillance frequencies to a licensee-controlled program. The proposed changes are described in TS Task Force (TSTF) Traveler, TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control - Risk Informed Technical Specification Task Force (RITSTF) Initiative 5b," as announced in the Notice of Availability published in the Federal Register on July 6, 2009 (74 FR 31996).

The NRC staff has determined that the following additional information is required to complete its review.

1. In LAR Attachment 1, page 3, item number 3, the licensee made the following statement regarding a variation from TSTF-425:

The insert provided in TSTF-425 to replace text describing the basis for each Frequency relocated to the Surveillance Frequency Control Program has been revised from, "The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program," to read, "The Frequency may be based on factors such as operating experience, equipment reliability, or plant risk, and is controlled under the Surveillance Frequency Control Program." This deviation is necessary to reflect the Byron Station basis for frequencies that do not, in all cases, base Frequency on operating experience, equipment reliability, and plant risk.

While the above TSTF-425 deviation from the TSTF-425 TS Bases statement addresses Surveillance Frequencies relocated to, but not changed under, the Surveillance Frequency Control Program (SFCP), it does not specifically exclude Surveillance Frequencies changes made in accordance with the SFCP and is, therefore, not consistent with SFCP requirements. Please provide additional clarification explaining how Byron Station intends to ensure that all Surveillance Frequencies relocated to the SFCP, with or without subsequent Frequency changes, will maintain: 1) Bases for unchanged Surveillance Frequencies and, 2) compliance with proposed Byron Station TS 5.5.19, "Surveillance Frequency Control Program" requirements.

2. In Table 2-1 of Attachment 2 of the LAR, Gap #4, regarding the Large Early Release Frequency (LERF) analysis, identifies 19 specific supporting requirement deficiencies to Capability Category II of the American Society of Mechanical Engineers (ASME) probabilistic risk assessment (PRA) Standard, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications." The description of the gap states that the analysis is based on the NUREG/CR-6595, "An Approach for Estimating the Frequencies of Various Containment Failure Modes and Bypass Events," methodology, and it represents a generally conservative,

ENCLOSURE

simplified approach. The importance to the application states that given the conservative nature of the methodology used, the LERF results are also believed to be conservative relative to this application. Supporting requirements LE-D1b and LE-F1a are not necessarily conservative for higher capability categories. Provide an assessment of the specific impact of the deficiency in regards to the application or provide a more thorough basis for why these two supporting requirements are considered more conservative for Capability Category I than II.

3. In Table 2-1 of Attachment 2 of the LAR, Gap #7, regarding model uncertainties and related model assumptions, identifies 20 supporting requirement deficiencies to Capability Category II of the ASME PRA Standard. The importance to the application states that each supporting requirement would be addressed by sensitivities per Nuclear Energy Institute (NEI) 04-10, "Risk-Informed Technical Specifications Initiative 5b, Risk-Informed Method for Control of Surveillance Frequencies," if applicable to the specific surveillance test interval evaluation. Supporting requirement LE-E4 requires quantification of LERF consistent with the applicable requirements of Tables 4.5.8-2(a), 4.5.8-2(b), and 4.5.8-2(c) of the ASME PRA Standard. The provided description of the gap, current status/comment, and importance to the application are not applicable to this supporting requirement. No adequate basis is provided for the justification of not meeting this supporting requirement; therefore, there is insufficient information for the NRC staff to reach a conclusion on the disposition of this peer review item. Provide a justification and a basis for the impact of not meeting this supporting requirement.
4. In Table 2-1 of Attachment 2 of the LAR, Gap #8, regarding model documentation, identifies 18 supporting requirement deficiencies to the model. The licensee states the importance to the application is that documentation issues do not affect the technical adequacy of the model. The following questions relate to Gap #8:
  - a. The NRC staff requires clarification for how an internal gap assessment to Capability Category II can be characterized as model documentation issues for technical requirements. The following supporting requirements are not described in the standard as documentation requirements and the NRC staff requests confirmation that these SRs technically meet capability category II: DA-C6; DA-C10; DA-D4; IE-C10; IF-C2; IF-C2c; IF-D7; IF-E3a; SY-A4. Given the importance of surveillance test and component demand data to this application, provide additional clarification for how the licensee plans to meet steps 7 and 8 of NEI 04-10 if DA-C6 and DA-C10 are not properly documented.
  - b. Of the 64 gaps identified in Attachment 2 Table 2-1, 23 are document-related. The licensee should address how it plans to maintain the long-term configuration management program without adequate documentation. Provide a general timeline for the closure of document-related gaps for the Byron PRA.

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Sincerely,  
/RA/

Marshall J. David, Senior Project Manager  
Plant Licensing Branch III-2  
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ADAMS Accession No.: ML101740384

\* RAI Transmittal Dates

NRR-088

OFFICE	LPL3-2/PM	LPL3-2/LA	DIRS/ITSB/BC	DRA/APLA/BC	LPL3-2/BC
NAME	MDavid	THarris	RElliott*	DHarrison*	RCarlson
DATE	7/19/2010	7/16/2010	05/20/2010	06/17/2010 and 07/01/2010	720/2010

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