



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

June 19, 2009

Mr. Charles G. Pardee  
President and Chief Nuclear Officer  
Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2, AND BYRON STATION, UNIT NOS. 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION RELATED TO DELETION OF E BAR DEFINITION AND REVISION TO REACTOR COOLANT SYSTEM SPECIFIC ACTIVITY TECHNICAL SPECIFICATION (TAC NOS. ME0206, ME0207, ME0208, AND ME0209)

Dear Mr. Pardee:

By letter to the Nuclear Regulatory Commission (NRC) dated December 4, 2008, (Agencywide Documents Access and Management System Accession No. ML083390706), Exelon Generation Company, LLC (the licensee), submitted a license amendment request to revise Technical Specifications (TSs) 1.1, "Definitions," and 3.4.16, "RCS [Reactor Coolant System] Specific Activity," and Surveillance Requirements 3.4.16.1 and 3.4.16.3. The proposed changes would replace the current TS 3.4.16 limit on RCS gross specific activity with a new limit on RCS noble gas-specific activity.

The NRC staff is reviewing your December 4, 2008, letter, 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). Your staff has agreed to provide a response to this RAI within 45 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".

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

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

Enclosure:  
Request for Additional Information

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REQUEST FOR ADDITIONAL INFORMATION

BRAIDWOOD STATION, UNITS 1 AND 2

AND BYRON STATION, UNIT NOS. 1 AND 2

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

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 December 4, 2008 (Agencywide Documents Access and Management System Accession No. ML083390706). The LAR requests to revise Technical Specifications (TSs) 1.1, "Definitions," and 3.4.16, "RCS [Reactor Coolant System] Specific Activity," and Surveillance Requirements 3.4.16.1 and 3.4.16.3. The requested changes would replace the current TS 3.4.16 limit on RCS gross specific activity with a new limit on RCS noble gas-specific activity. The LAR states that the changes are consistent with NRC-approved TS Task Force (TSTF) Change Traveler, TSTF-490, Revision 0, "Deletion of E Bar Definition and Revision to RCS Specific Activity Tech Spec." The NRC staff has determined that following additional information is required to complete its review.

The proposed Inserts A and B contained in the LAR provide definitions for "dose equivalent I-131" (DEI) and "dose equivalent Xe-133," respectively. Insert A indicates that DEI may be determined using several references for dose conversion factors (DCFs). However, the purpose of the limiting condition for operation (LCO) for DEI is to satisfy Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36, Criterion 2, which establishes, in part, an operating restriction that is an initial condition of a design-basis accident (DBA). When surveillance of the RCS' radionuclides is performed, each acceptable set of DCFs will yield a different DEI. As approved by the NRC staff, the intent of TSTF-490 was to allow the licensee to select, from the acceptable list, one DCF reference for the calculation of DEI. Therefore, consistent with 10 CFR 50.36 and TSTF-490, the licensee should specify one DCF reference for DEI, which will be consistent with the specified LCO and DBA analysis, or justify why a list of several DCFs is consistent with the specified LCO and DBA analysis. Therefore, please justify how the use of multiple DCFs maintains consistency with the specified LCO values and DBA analyses, or provide a revised definition that incorporates the DCFs appropriate for both the Braidwood and the Byron TSs.

ENCLOSURE

June 19, 2009

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*/RA/*  
Marshall J. David, Senior Project Manager  
Plant Licensing Branch III-2  
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